このまち思いエネルギー。
広島ガス
HIROGAS

# Hiroshima Gas CSR Report 2021

Corporate Social Responsibility Report

Digest

Creating a sustainable society with our hands...

# Flow of delivering natural gas to our customers

## City gas supply flowchart

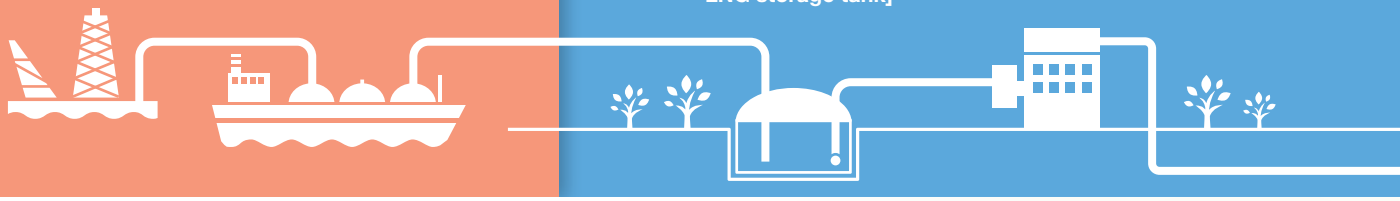
**Raw material procurement and transport** → **City gas production**

Natural gas is extracted overseas, cooled to approximately -160°C, liquefied, and then imported as LNG (liquefied natural gas).

Prigorodnoye facilities in Russia

LNG is placed into storage tanks and vaporized according to demand. It then undergoes calorific value adjustment and is supplied as city gas.

Hatsukaichi LNG terminal




## Supply area and organization

(As of March 31, 2021)

**Supply area (7 cities and 4 towns within Hiroshima prefecture)**
Hiroshima, Kure, Onomichi, Mihara, Hatsukaichi, Higashi-hiroshima, Fukuyama, Aki-gun Kaita-cho / Saka-cho / Fuchu-cho / Kumano-cho

Number of customers **415,000**

**Hiroshima district**
Number of customers **352,000**

Kabe facilities

Higashi-hiroshima plant

Head office

Kaita facilities




Hatsukaichi LNG terminal

**Kure district**
Number of customers **46,000**

Kure branch

Kumano facilities

## City gas supply

## Delivery to customers

Gas is supplied to customers through 5,232km of underground piping (supply and service pipelines).

Gas pipe bridges

The gas that we supply can be used in a variety of applications.

Factories, etc.

Hotels, buildings, schools, etc.

Kitchens, hot water supply, etc.


Natural gas is an environmentally friendly type of energy!

LNG tanker trucks

Bingo plant

### Wholesale supply
(Hiroshima Gas)

Wholesale supply utilizing equipment from Setouchi Pipeline Co., Ltd., a consolidated subsidiary

Mizushima station
(Setouchi Pipeline Co., Ltd.)

Mizushima LNG terminal
(Mizushima LNG Co., Ltd.)

**Hiroshima prefecture**

**Okayama prefecture**

Mizushima station
Mizushima LNG terminal

Fukuyama Gas Co., Ltd.

Bingo plant

Onomichi branch

Energy plays an important part in every part of our lives.

**Onomichi/Mihara district**

Number of customers
**17,000**

Onomichi branch

| Legend | | | |
|---|---|---|---|
| Supply area (Hiroshima district) | | Gas holder | |
| Supply area (Kure district) | | Gas production plant | |
| Supply area (Onomichi/Mihara district) | | Head office/Branch/Facilities | |
| Pipeline (Hiroshima Gas) | | Proposed pipeline | |
| | | Pipeline (Setouchi Pipeline) | |

# Hiroshima Gas Group 2030 Vision

## 1 Slogan for Hiroshima Gas Group 2030 Vision

**Sending moving messages that make us happy**

### Three Basic Values Our Slogan Represents

1. The Hiroshima Gas Group grows with the community
2. Energy that truly benefits communities
3. To pursue inspiration and send moving messages that we can share with the entire community

## 2 Basic Policies for 2030 Vision

| | |
|---|---|
| 1 Pursuit of inspiration through our operational policies | 2 Pursuit of inspiration through our energy service |
| 3 Pursuit of inspiration through peace of mind | 4 Pursuit of inspiration through connection with others |

# Declaration of the Sustainable Development Goals set by Hiroshima Gas Group for the benefit of communities

### Declaration of the Sustainable Development Goals set by Hiroshima Gas Group for the benefit of communities: Taking action to create a brighter future

Based on our management philosophy of "striving to be a company trusted by the community", Hiroshima Gas Group seeks to implement viable corporate governance and work toward the Sustainable Development Goals proposed by the United Nations in order to contribute to building a sustainable society under the company slogan of "energy that truly benefits communities".

October 30, 2020 Hiroshima Gas Group

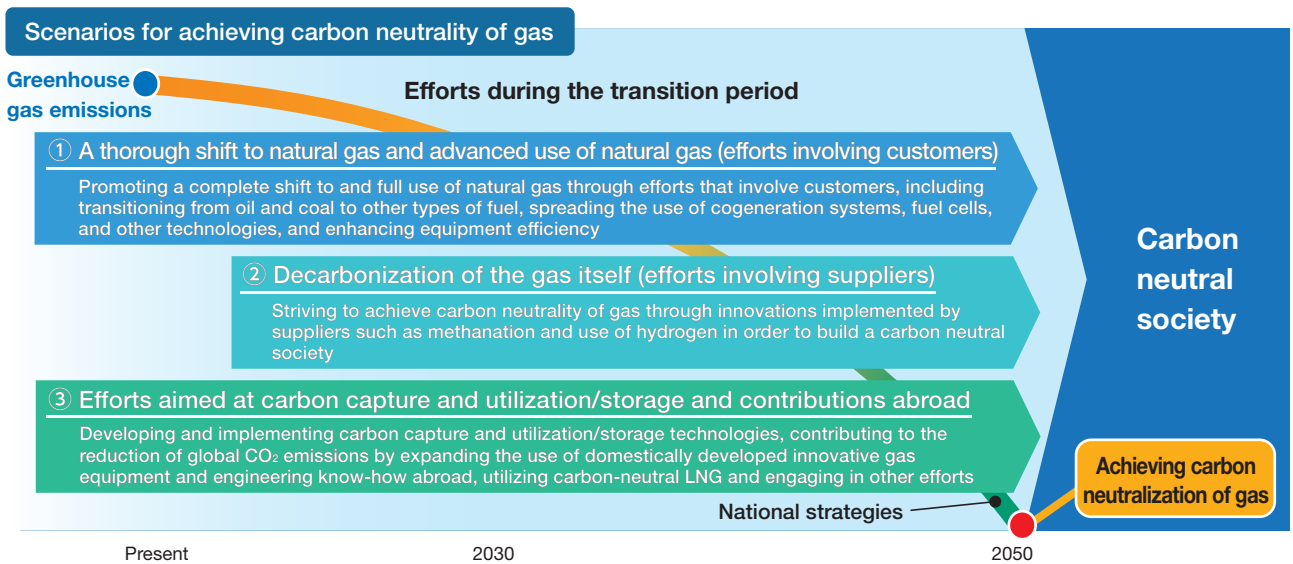
Poster for "Declaration of the Sustainable Development Goals set by Hiroshima Gas Group for the benefit of communities"

# Efforts by Hiroshima Gas Group to achieve carbon neutrality by 2050

### Efforts by Hiroshima Gas Group to achieve carbon neutrality by 2050: Aspiring to develop businesses that contribute to the creation of a carbon neutral society

- We are committed to reducing cumulative $CO_2$ emissions by 2050 through a complete shift to and full use of natural gas.
- By aspiring to develop businesses that contribute to the creation of a carbon neutral society, we want the Hiroshima Gas Group to grow with the community.

(Reference) Gas Industry Scenarios for Achieving Carbon Neutrality of Gas




Source: "Carbon Neutral Challenge 2050 Action Plan" by The Japan Gas Association

## Developing businesses that contribute to the creation of a carbon neutral society

### Kaita power generation using biomass co-firing technology

Kaita Power Station (Kaita Biomass Power)

### Small-scale hydropower generation

Hiroshima Gas Shiwahori Power Station (water turbine and generator)

### Revitalization of local forests


"Hiroshima Gas Jinsekikogen Forest for the Benefit of Communities" event for celebrating the opening

# Management

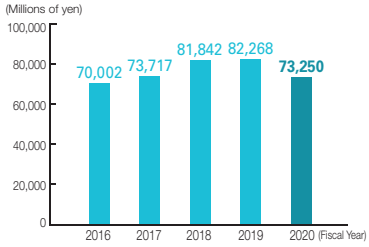
## Delivering safe, stable, and clean natural gas


### Company performance information

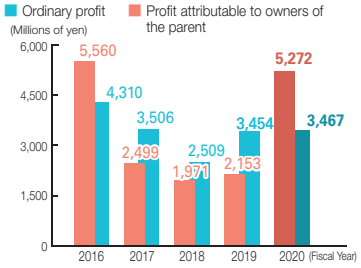
## First decrease in revenue in four years and second consecutive year of increase in ordinary profit

Due to a drop in the gas unit sales price and decrease in gas sales of commercial and wholesale supply, consolidated net sales in FY2020 totaled 73,250 million yen for a decrease in revenue of 9,017 million yen (11.0%) when compared with the previous fiscal year.
In regard to profits, ordinary profit was 3,467 million yen, an increase of 13 million yen (0.4%) compared to the previous fiscal year. Profit attributable to owners of the parents was 5,272 million yen, an increase of 3,119 million yen (144.9%), due to extraordinary gain recorded and similar factors.

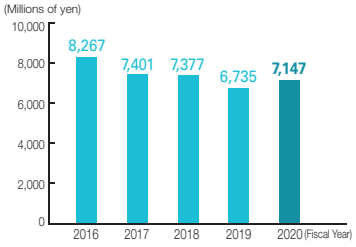
### Consolidated net sales



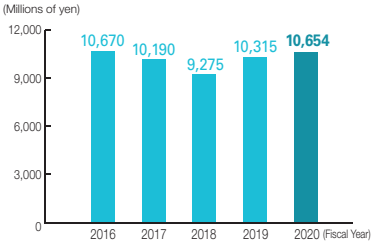

### Consolidated profit



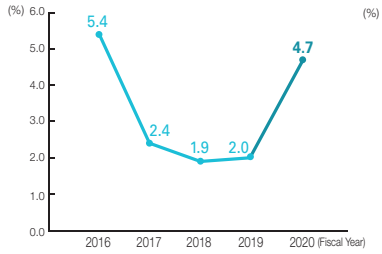

### Capital expenditure



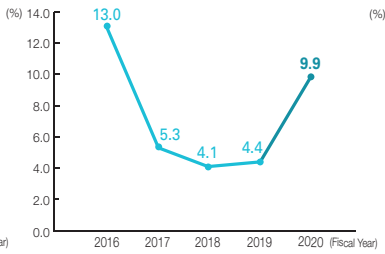

### EBITDA



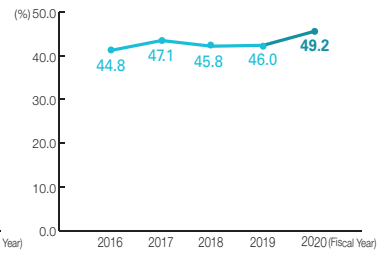

### Return on assets (ROA)



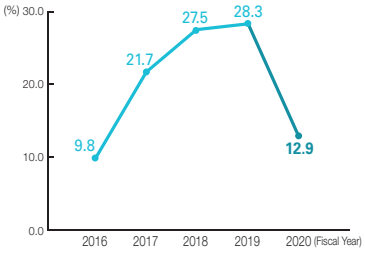

### Return on equity (ROE)




### Equity ratio




### Payout ratio




### Business segment information

[FY2020]

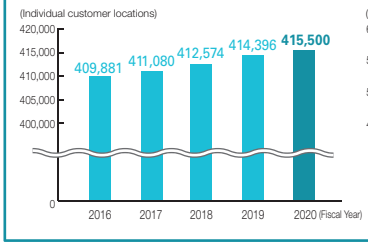
(Unit: Millions of yen)

| | Net sales | Segment profit or loss |
|---|---|---|
| Gas business | 58,694 〔 △11.0% 〕 | 2,532 〔 19.5% 〕 |
| LPG business | 13,747 〔 △4.3% 〕 | 453 〔 31.9% 〕 |
| Other | 3,112 〔 △30.8% 〕 | △ 9 〔 — 〕 |
| Adjusted values | △ 2,303 | 317 |
| Consolidated | 73,250 〔 △11.0% 〕 | 3,293 〔 10.9% 〕 |

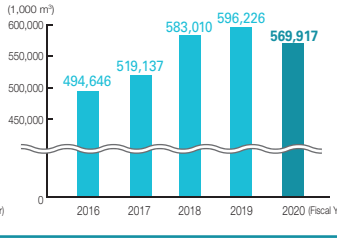
* Figures in parentheses indicate change from the previous fiscal year.
Note: As figures for each segment are rounded down to the nearest million yen, the total of the adjusted value and each segment may not match the consolidated total.

### Yearly overview

#### Number of customers




#### Gas sales volume




* EBITDA = Operating profit + Depreciation cost

* Return on assets (ROA) = Profit attributable to owners of the parent / Average total assets ×100

* Return on equity (ROE) = Profit attributable to owners of the parent / Average equity capital ×100

* Equity ratio = Equity capital / Total assets ×100

## Business activities

### LNG procurement and production

Based on long-term contracts with Sakhalin (Russia), Osaka Gas Co., Ltd., and Malaysia, it is possible to source 400,000 tons of LNG per year. This is the raw material used to create city gas. City gas is produced at the Hatsukaichi LNG terminal, the Bingo plant, and the Higashi-hiroshima plant. LNG (liquefied natural gas) reception and the entire gas production process at these locations are tightly controlled via the central control room.


LNG ship entering port for loading or unloading and our Hatsukaichi LNG terminal


Central control room

### Supply and distribution plants

In order to reliably supply customers with city gas produced in our factory, the security command center constantly monitors the gas pressure and supply state. To ensure adequate response in an emergency situation, we have established a system that allows quick 24-hour response and dispatch even during night hours and holidays.


Security command center


Emergency vehicles


Gas piping work

### Business

We have established a system to allow more customers to safely and reliably use environmentally friendly natural gas.

Gas Safety Guidebook


Safety inspection of gas equipment


Maintenance of an "Ene-Farm" household fuel cell

# Environment

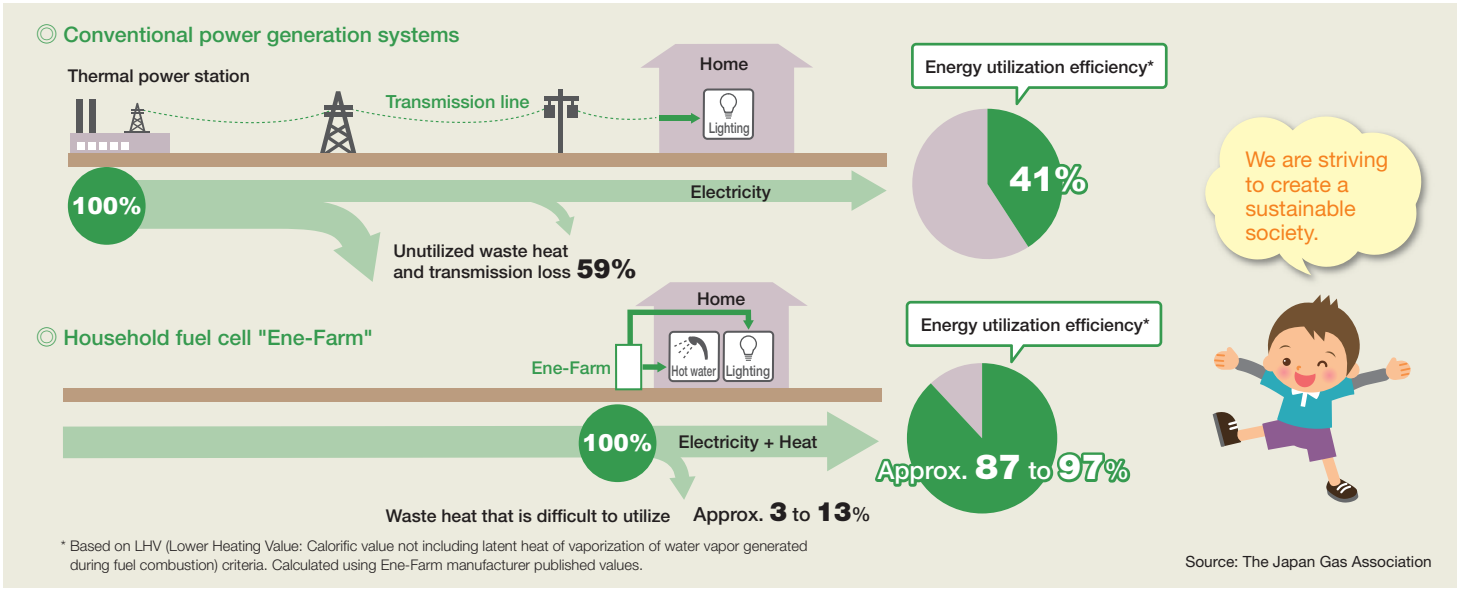
## Actively working toward an expanded and full use of natural gas in order to build a carbon neutral society with a low carbon footprint

**Promotion of high-efficiency natural gas applications**

**Rather than simply generating heat, natural gas can be used for a wide range of applications such as generating electricity (in gas cogeneration systems), cooling/heating, and powering natural gas vehicles.**

### Comparison of energy utilization efficiency

Most heat generated by power stations is discarded. Power transmission losses also occur during transmission to far away homes. Using our “Ene-Farm” household fuel cell (a household gas cogeneration system) allows users to create energy at the same location as where it is used, reducing losses and enabling effective use of waste heat. With an expected energy utilization efficiency of around 80 to 90%, it has superior energy savings and environmental friendliness.




* Based on LHV (Lower Heating Value: Calorific value not including latent heat of vaporization of water vapor generated during fuel combustion) criteria. Calculated using Ene-Farm manufacturer published values.

Source: The Japan Gas Association

### Promotion of a full use of natural gas (residential use)

While working to spread the use of natural gas, we are creating initiatives that can further conserve energy, reduce $CO_2$, and expand the use of ZEH* (net zero energy houses) to improve the standard of living for all people. These initiatives include promoting the full utilization of energy and using natural gas to compensate for fluctuations in the output of renewable energy sources such as solar power.

* ZEH: Home with an annual primary energy consumption balance of +/- zero.

#### The spread of highly efficient household equipment

**[Proposal for an environmentally friendly futuristic "Smart energy house"]**

**Double power generation "The evolution from energy-efficient houses to energy-creating houses"**

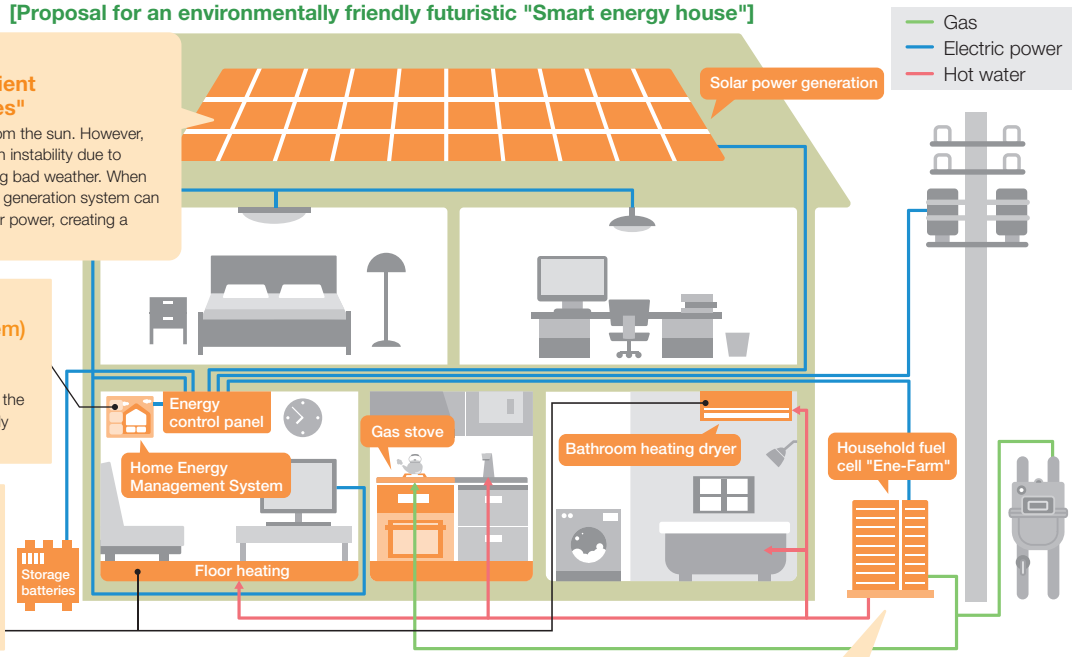
Solar power generation systems harness light from the sun. However, there is the inherent problem of power generation instability due to non-operation at night and reduced output during bad weather. When combined with the Ene-Farm, this double power generation system can compensate for the inherent weaknesses of solar power, creating a house that is able to generate its own electricity.

**Optimal use of energy with HEMS (Home Energy Management System)**

HEMS allows visualization of energy use in the home. It controls home systems to optimize creation, storage, and usage of energy to realize the goal of living in a comfortable and environmentally friendly "smart house".

**Gas hot water underfloor heating and bathroom heating dryers**

This system circulates hot water for heating and clothes drying. As it uses a very small amount of electricity, it can significantly reduce peak power usage.




**High efficiency water heater "Eco-Jozu" (Cumulative sales of 61,912 units)**

(As of March 31, 2021)

This highly efficient water heater uses condensing technology to take advantage of previously unutilized waste heat in order to raise thermal efficiency from 80% to 95%.

High efficiency water heater "Eco-Jozu"

Household fuel cell "Ene-Farm"

Made by company "P" (Solid polymer type)

Made by company "A" (Polymer electrolyte type)

**Household fuel cell "Ene-Farm" (Cumulative sales of 3,155 units)**

(As of March 31, 2021)

An "Ene-Farm" is a device that reacts hydrogen extracted from sources such as natural gas with oxygen in the air to generate electricity. The heat from this chemical reaction is then utilized to make hot water. When compared with conventional water heating systems, this cutting-edge highly energy efficient power generation and water heating system can reduce annual $CO_2$ emissions in standard homes by around 1.2t to 2.1t.

## Promoting the transition to new types of fuel (industrial use)

Around 50% of our natural gas sales at Hiroshima Gas are for industrial customers. The transition from petroleum-based fuel to natural gas enables a 25% reduction in $CO_2$ emissions.

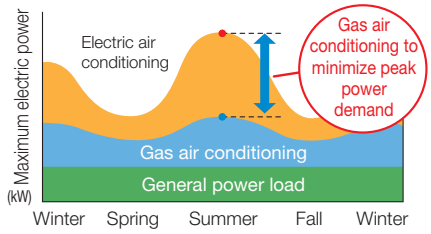
Gas industrial furnace

## Promotion of a full use of natural gas (commercial use)

### Promotion of gas heat pumps (GHP) and gas absorption chillers (natural chiller)

Gas heat pumps and gas absorption chillers for gas-powered air conditioning systems have a big impact in cutting summer and winter peak power demand.

[Leveling consumed power by GHP (Illustration)]




Gas heat pump (GHP)

Gas absorption chiller (Natural chiller)

## Expanded utilization of renewable energy

Kaita Power Station (a power station using biomass co-firing technology), which is part of Kaita Biomass Power Co., Ltd. founded in October 2017, started operating in April 2021. Our business operations here will focus on utilizing timber offcuts and other unused wood from Hiroshima Prefecture as well as woody biomass imported from abroad. Additionally, Hiroshima Gas Shiwahori Power Station (a small-scale hydropower station) in Shiwahori (Shiwa Town, Higashihiroshima City) started operating in June 2021.

Kaita Power Station <Kaita Biomass Power>
(Myojinmachi, Kaita Town)

# Society We cherish the connections with our community

**Relationship with local communities**

As a company that has a strong relationship rooted in the local area, Hiroshima Gas conducts a wide range of social contribution activities.

## Promotion of arts, culture, community, and sport

### The 34th Hiroshima Symphony Orchestra Concert

Concert stage

### Children cafeteria “Egao Shokudo” for the Benefit of Communities (Committee Office, Hiroshima Gas)

Lunch box meals prepared by volunteers

## Educational support (Commitment to the next generation of education)

As part of our efforts to contribute to local communities, we cooperate with government agencies, education committees, schools, businesses, and other organizations with the aim of actively developing next-generation education programs.

Lifeline disaster prevention class

**[Energy and environmental education]**
Science shows, Technical Research Institute science experiment lessons

**[Disaster prevention education]**
Lifeline disaster prevention classes

**[Food education]**
Tasting classes, Eco-cooking* classes

Note: "Eco-cooking" is a registered trademark of Tokyo Gas Co., Ltd.

**[Fire education]**
Fire education classes


Next-generation educational programs pamphlet

## Management philosophy

### Striving to be a company trusted by the community

Based on our management philosophy that aims to create a company that is trusted by the local community, Hiroshima Gas wishes to continue carrying out business activities emphasizing on the stable supply of energy and ensuring the safety of all as our corporate social responsibility.

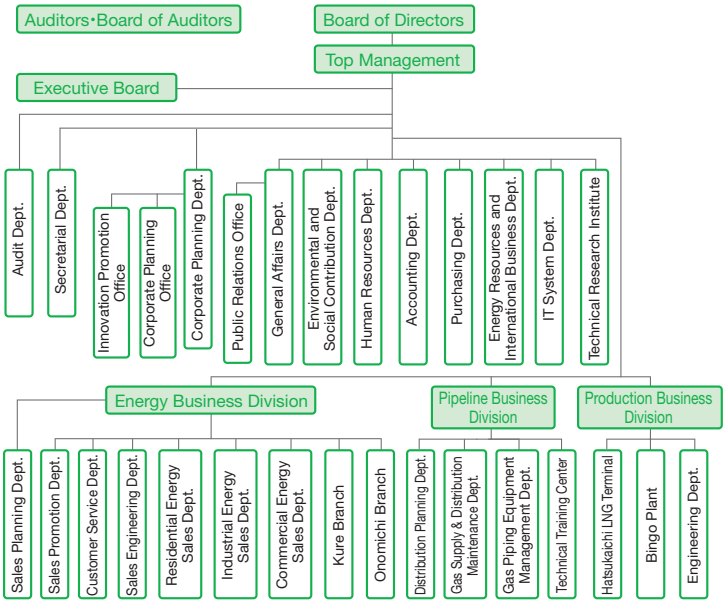
Hiroshima Gas Head Office Area

| | |
|---|---|
| Head office address: | 2-7-1, Minamimachi, Minami-ku, Hiroshima TEL 082-251-2176 |
| Established: | October 1909 |
| Capital: | 5.203 billion yen |
| Number of employees: | 685 |
| Business field: | 1 Gas business<br>2 Sales of gas appliances<br>3 Sales of liquefied natural gas |

(As of March 31, 2021)

## Organizational chart

(As of April 1, 2021)




## Regional service representatives

### ◎ Gaslife

Business hours: 9:00am to 5:30pm (Monday to Saturday)

| | |
|---|---|
| 1 Gaslife Hiroshima | 1-30, Minamitakeya-cho, Naka-ku, Hiroshima |
| 2 Gaslife Aki | 3-1-14, Funakoshiminami, Aki-ku, Hiroshima |
| 3 Gaslife Itsukaichi | 2-7-43, Kairoen, Saeki-ku, Hiroshima |
| 4 Gaslife Gion | 5-13-1, Nishihara, Asaminami-ku, Hiroshima |
| 5 Gaslife Kure | 1-6-16, Chuo, Kure |
| 6 Gaslife Onomichi | 3-2, Tenma-cho, Onomichi |
| 7 Gaslife Kabe | 9-13-7, Kameyama, Asakita-ku, Hiroshima |
| 8 Gaslife Saijo | 4-38, Saijogojo-cho, Higashi-hiroshima |

All Gaslife stores

ナビダイヤル® **0570-550-720**

* If you cannot use the Navi-Dial service (e.g., if you are using an IP phone or calling from abroad), please dial 082-240-8891.

[Reception hours] Monday to Saturday (national holidays excluded) from 9:00am to 7:00pm
[Closed] Sundays, national holidays, year-end and New Year holidays (December 31 to January 4)

## Overview of main subsidiaries

(As of March 31, 2021)

### Hiroshima Gas Propane Co., Ltd.

•Capital: 300 million yen •Established: March 1969 •Sales: 9,608 million yen •Number of employees: 91

### Hiroshima Gas Techno-Service Co., Ltd.

•Capital: 80 million yen •Established: June 1998 •Sales: 9,884 million yen •Number of employees: 204

### Hiroshima Gasmate Co., Ltd.

•Capital: 20 million yen •Established: April 1975 •Sales: 913 million yen •Number of employees: 149

### Hiroshima Gaslife Co., Ltd.

•Capital: 15 million yen •Established: June 2018 •Sales: 3,560 million yen •Number of employees: 157

### Be-Smile Co., Ltd.

•Capital: 50 million yen •Established: June 2001 •Sales: 181 million yen •Number of employees: 25

### Setouchi Pipeline Co., Ltd.

•Capital: 150 million yen •Established: May 2003 •Sales: 1,104 million yen •Number of employees: 12

### HG LNG Shipping Corporation

•Capital: 1 million yen •Established: February 2005 •Sales: 3,493 million yen

### ◎ Showroom

Experience the latest gas equipment and the sheer warmness provided by gas.

**Examples of exhibition equipment**

● Household fuel cell (Ene-Farm) ● Floor heating and bathroom heater comparison rooms ● Try it! Kitchen activities (Kitchen comparison) ● Solar power generation

Gastopia Center
1-30, Minamitakeya-cho, Naka-ku, Hiroshima
TEL: 082-240-8888

Gastopia Itsukaichi
2-7-43, Kairoen, Saeki-ku, Hiroshima
TEL: 082-923-5678

Gastopia Gion
5-13-1, Nishihara, Asaminami-ku, Hiroshima
TEL: 082-850-3506

Gastopia Aki
3-1-14, Funakoshiminami, Aki-ku, Hiroshima
TEL: 082-821-1130

Gastopia Kure
1-6-16, Chuo, Kure
TEL: 0823-22-1262

Gastopia Onomichi
3-2, Tenma-cho, Onomichi
TEL: 0848-22-2161

**Hiroshima Gas Co., Ltd.**
2-7-1, Minamimachi, Minami-ku, Hiroshima 734-8555
Public Relations Office, General Affairs Dept.: 082-252-3000 (Direct line)

**Hiroshima Gas Website**
https://www.hiroshima-gas.co.jp/english/index_e.htm

* Some of the photos included in this publication were taken before the COVID-19 pandemic.