

Social Impact of Business Activities in Our Energy Value Chain and Efforts to Reduce Such Impact

LNG Value Chain

Drilling

In recent years, expectations are turning more toward natural gas. Under these circumstances, Osaka Gas has been working to diversify the sources from which natural gas is procured. The Company has also been participating in gas field development. By doing so, we are striving to establish a system to procure LNG at reasonable prices and in a stable manner.

8 countries

Forming long-term contracts with Osaka Gas

Transportation

The Daigas Group efficiently operates LNG tankers it owns and those owned by other companies with the aim of ensuring safer and steady LNG transportation.

Approx. 9,518,000 tons/year

(including LNG for electricity generation and wholesale trade)

Identified Important Aspects and Its KPIs to Be Pursued Through Value-Chain

The Daigas Group has identified material aspects of its business and KPIs to be pursued as part of its efforts to grasp and manage the possible effects of its business activities on the environment and society, with a view toward creating a sustainable society. To visualize its CSR activities in line with each CSR Charter, the Group sets CSR Indicators and implements relevant measures.

Materiality (→P25)
CSR Indicators (→P24)

GRI Standards Items Identified as Materiality

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|------------------------------|----------------------|
| Customer Health and Safety | Local Communities |
| Product and Service Labeling | Customer Privacy |
| Energy / Emissions | Grievance Mechanisms |
| Effluents and Waste | Supplier Assessment |

CSR Indicators under each Daigas Group CSR Charter

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| Customer Satisfaction Survey |
| Environmental Management Efficiency |
| Communication events / Social contribution activities |
| Scores on compliance awareness / Percentage of employees receiving the "Compliance Training" |
| Employee Attitude Survey |

Electricity Value Chain

Transportation

Activities Undertaken under each KPI

Global environment Promote the efficient energy use and reduce GHG emissions (→P31) / Promote the efficient use of natural resources and reduce the impact

Business partners Responds to grievances (→P35) / Promote CSR activities in cooperation with business partners (→P36) /

Major Issues to be Tackled

Global environment

- Emissions of greenhouse gases (GHG) associated with energy consumption involved in drilling of gas resources
- Environmental nuisance and troubles caused during drilling of gas resources
- Impact on biodiversity in neighborhoods

Business partners

- Safety, sanitary conditions and human rights of workers employed by gas suppliers

Major Issues to be Tackled

Global environment







- Emissions of GHG associated with energy consumption involved in operations of LNG tankers
- Environmental problems caused during operations of LNG tankers
- Impact of ballast water used by LNG tankers on biodiversity

Business partners

- Safety, sanitary conditions and human rights of crewmen working at LNG tankers

The Daigas Group procures natural gas, which is an environmentally-friendly and stable energy source, from overseas suppliers, and provides city gas to about 5,996,000 customers and electricity to about 619,000 customers, both mainly in the Kansai Region. The Group ensures the safety of customers and gives them peace of mind by procuring natural gas in a stable manner and building a solid security and accident-prevention system.

(As of March 31, 2018)

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|  <h3>Processing</h3> <p>LNG terminals are a vital component of the LNG business. Osaka Gas has established a robust LNG processing system to secure stable supply of city gas to its customers.</p> <p>2 locations Number of LNG terminals</p> |  <h3>Supply</h3> <p>To ensure stable city gas supply, Osaka Gas has been renovating processing facilities and building gas pipeline networks in accordance with meticulous plans. We have established a solid system in order that we can exercise safety and security measures 24 hours a day, 365 days a year in response to any emergency.</p> <p>Approx. 62,400 km Total length of gas pipelines extended</p> |  <h3>Sales and Consumption</h3> <p>Osaka Gas is committed to promoting further energy saving by its gas appliances. Osaka Gas is also dedicated to reducing CO₂ emissions and saving energy by providing highly efficient air-conditioning systems and cogeneration systems to its business and industrial customers.</p> <p>Approx. 5,996,000 customers Number of customers receiving gas from Osaka Gas</p> |
|  <h3>Electricity generation</h3> <p>Daigas Group engages in the electricity generation business using various power sources it owns, including thermal power generations, gas cogeneration systems and renewable energy sources. The Group makes efforts to ensure stable and safe electricity generation.</p> <p>Approx. 2,007,000 kW*</p> |  <h3>Electricity transmission</h3> <p>(via the grid own by the power company)</p> <p>Electricity generated from power sources owned by the Daigas Group is supplied to customers using the grid operated by Kansai Electric Power Co., Inc. The use of Kansai Electric Power's grid makes the power supply of the Daigas Group less vulnerable to emergency problems that may occur at power stations operated by the Group—a mechanism that would not result in the interruption of electricity supply.</p> |  <h3>Sales and Consumption</h3> <p>Daigas Group currently provides electricity to customers in the six prefectures of the Kansai region, and Fukui, Mie and Gifu prefectures in central Japan.</p> <p>Approx. 619,000 customers Number of customers receiving low-voltage electricity</p> |

* Power generation capacity owned by the Daigas Group is included but plants not yet in operation are excluded. (As of the end of June 2018)

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| Customers | <p>416 Ensure the safety of customers and a stable energy supply (→P29) / General Disclosures Enhance the quality of security and safety work, and ensure the appropriate provision of information (→P30) / 302 305 Promote efficient energy use and reduce GHG emissions (→P31) / 418 Protect customers' private information (→P34) / Management Responds to grievances (→P35) / Charter I Enhance customer satisfaction with main duties involving contacts with customers (→P37, 40) / Charter II Reduce the impact of business activities on the environment (→P42, 45-48)</p> |
| Local communities | <p>on the environment (→P32) / 308 414 Promote CSR activities in cooperation with business partners (→P36) / Charter II Reduce the impact of business activities on the environment (→P42, 45-48)</p> <p>416 Ensure the safety of customers and a stable energy supply (→P29) / General Disclosures Enhance the quality of security and safety work, and ensure the appropriate provision of information (→P30) / 413 Respond to local communities (→P33) / Management Responds to grievances (→P35) / Charter III Communication and social contribution activities (→P49-51)</p> <p>Charter IV Promote compliance and respect human rights (→P52-53)</p> |
| Employees | <p>308 414 Promote CSR activities in cooperation with business partners (→P36) / Charter IV Promote compliance and respect human rights (→P52-53) / Charter V Establish foundation for the use of diversified human resources (→P56-58)</p> |

Global environment

- Emissions of GHG associated with energy consumption and power generation at LNG terminals and electric power plants

Local communities **Customers**

- Safety in the neighborhoods of LNG terminals and power plants
- Production- and power generation-related problems caused by natural disasters

Employees **Business partners**

- Safety, sanitary conditions and human rights of employees working at the sites

Global environment

- Excavated soil discharged during the laying of gas pipes

Local communities **Customers**

- Supply problems caused by natural disasters

Employees **Business partners**

- Safety, sanitary conditions and human rights of employees laying gas pipes

Customers **Global environment**

- GHG emissions accompanying gas consumption at customers

Customers

- Accidents at customer's sites due to usage of gas equipment without safety mechanisms
- Provision of appropriate information regarding products, services and rates
- Protection of personal information of customers

Local communities

- Contribution to local communities via educational support

Employees **Business partners**

- Safety, sanitary conditions and human rights of employees working at sites