

中國天然氣集團有限公司 CHINA LNG GROUP LIMITED

(incorporated in the Cayman Islands with limited liability)

(Stock Code: 931)

2016

Environmental, Social and Governance Report



INTRODUCTION

This is the environmental, social and governance report of China LNG Group Limited (the “Company”, together with its subsidiaries, the “Group”) as of 31 December 2016, the scope of which covers the Company and its subsidiaries.

The principal activities of the Group are development of LNG businesses including point-to-point supply (“point-to-point supply”) and wholesale of LNG, provision of finance leasing services for LNG vehicles, vessels and equipment in the PRC as approved by Ministry of Foreign Trade and Economic Cooperation of the PRC, trading of securities, provision of securities brokerage, margin financing and securities investment, property investment and financial services through its money lending business in Hong Kong.

“Tackling with smog, Improving environment” is the mission of the Group. To this end, we closely communicate with The National Energy Administration and The Ministry of Environmental Protection of the People’s Republic of China. In 2016, the Group always embraced the concept of “Promoting clean energy – use of natural gas”, highlighting scientific development and continuously enhancing corporate and economic benefit. Under the general framework of fulfilling social responsibility and satisfying users’ satisfaction, the Company strive for sustainable development through comprehensive and strict management, reform and innovation.

This report consists of four parts, namely operation value, working environment, environmental protection and social participation.

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I. VALUE OF OPERATION

1. Operating results

The gradual recovery of global oil prices since the beginning of 2016 coupled with the continuous promotion of natural gas utilisation projects including “coal-to-gas” conversion by the PRC government with an aim to improve air quality have increased market demand for natural gas and triggered a significant upward adjustment in natural gas price.

The Group continued to maintain stable growth during a year of both opportunities and challenges. Revenue and profit attributable to equity shareholders for the year 2016 reached HK\$200 million and HK\$92 million respectively, representing an increase of 550.7% and a decrease of 77.1% respectively over the last year.

During 2016, China LNG Finance Leasing Company Limited, a wholly-owned subsidiary of the Group, entered into new finance lease agreements for 789 heavy duty LNG vehicles including tractors and trailers, and for 7 LNG vessels built by a few big ship manufacturers. The leasing principal amounted to HK\$215 million.

During 2016, a total of 17 new point-to-point LNG supply contracts were entered into by the Group with customers. The total sales volume of LNG amounted to 1.4 million cubic metres for the whole year.

2. Supply chain management

The Group regulates the management of suppliers by exercising strict credit control and implementing transparent procurement process by open tenders. The selection of suppliers is strictly subject to the following selection process:

- (1) Nominated suppliers are subject to a screening process in which their experience, technical expertise and capacity will be taken into account. Those who are accepted will be added to a list of qualified suppliers.

I. VALUE OF OPERATION (continued)

2. Supply chain management (continued)

- (2) When procurement of equipment or materials is to be made, the Group will select more than 5 qualified suppliers from the list to submit tenders. Preliminary review of documents and discussion on bidding proposals will be conducted. When the final decision is made after deliberation, the Group will enter into a purchase agreement with the selected supplier.

3. Product responsibility

The Group is very optimistic about the development of the LNG market in the PRC. Under the 13th Five-Year Plan approved by the Chinese government, the proportion of natural gas utilisation in the energy consumption composition will be increased from 6.3% to 10%, representing an increase in the volume of utilisation from 200 billion cubic metres to 400 billion cubic metres every year. In December 2016, the Beijing city government issued a pollution “red alert” for more than 7 days, schools were closed, thousands of vehicles were ordered off the roads and residents were reminded to stay indoors.

The Ministry of Environmental Protection of the PRC reported that apart from Beijing, 24 other cities across Northern and Central China, including Tianjin, Shijiazhuang, Taiyuan and Zhengzhou had also issued pollution red alerts. The widespread air pollution had posed disruption to the people’s daily life in the PRC.

The Group continued to maintain its focus on the development of finance leasing business which is a key to create larger user groups and increase the demand for LNG and the number of LNG refuelling stations across the PRC. The Group also started point-to-point LNG supply projects for industrial users since the second half of 2016.

I. VALUE OF OPERATION (continued)

3. Product responsibility (continued)

Industrial users are the major customers of our point-to-point supply business. Upon the installation of point-to-point supply equipment, the Group's products need to undergo a pre-cooling procedure in storage tanks, debugging and trial operation before commercial operation, during which the Group guarantees to provide gas supply to customers for a term of 5-10 years in accordance with contracts.

The Group provides finance lease services to users mainly for LNG vehicle, LNG vessel and LNG equipment. The Group charges a low rate for the services, coupled with flexible and customised solution. The requirements and terms of our financing services are more lenient and favourable than those offered by banks and our peers.

All-round after-sale services are provided to LNG end users. Through our "Green Engine" platform ("Green Engine"), we gather natural gas vehicle and vessel end users. With the card issued by China Construction Bank specifically for Green Engine, loyalty of end users and users of Green Engine has been enhanced, which has improved the cohesion with Green Engine. By virtue of a massive number of customers, the Group gains additional bargaining power over gas suppliers, insurance companies and vehicle and vessel manufacturers. Part of the gain from preferential pricing will be rewarded to our members, which will further inspire members' loyalty.

Meanwhile, the Group also provides a series of quality services, including vehicles monitoring and vehicles sales, and launched Green Engine mobile application, a comprehensive mobile platform for the utilisation and service of LNG.

4. Anti-corruption

The Group has been actively working on the establishment of punitive and preventive measures against corruption. It set up a long-term effective system by firstly establishing inspection and supervisory team, building system and developing work force.

I. VALUE OF OPERATION (continued)

4. Anti-corruption (continued)

The Group always attaches importance to the establishment of a system advocating anti-corruption and promoting moral cleanliness. On the foundation of 9 issued directives, namely "Anti-commercial Bribery Management System for the Company's Leadership", "Anti-commercial Bribery Management System for Procurement Personnel and Sales Personnel", "Anti-commercial Bribery Management System for Sales and Purchase of Invoice", "Anti-commercial Bribery Management System for Sales and Purchase Funding", "Anti-commercial Bribery Management System for Accountants and Cashiers", "Regular Examination System for Anti-commercial Bribery", "Whistleblowing and Registration Management System for Anti-commercial Bribery", "Social Assessment Management System for Anti-commercial Bribery", "Accountability System for Anti-commercial Bribery" and "Information Management System for Anti-commercial Bribery", we further standardised our operational management.

The Group has brought the construction of a clear and honest Party and anti-corruption into the general layout of enterprise reformation and development. It has been actively participating in interaction and collaboration among inspection and supervisory, judiciary, administration and law enforcement and state-owned system, which enabled the major responsibilities in constructing and supervising a clear and honest Party to be fulfilled efficiently, and the establishment of supervisory team under various functions such as discipline inspection, supervision and audit to be further optimised. The goal is to establish a supervision mechanism in which the disciplinary committee plays a leading role with concerted efforts from the compliance department, audit department, the board of supervisors, and other departments of relevant functions, further perfecting the corporate supervision system with an organic integration of anti-corruption and business management.

II. WORKING ENVIRONMENT

1. Corporate environment

The Group adheres to its “people-oriented” principle of development, which emphasises on staff management, and has established various systems, including the “Staff Management System”. It endeavours to create better working environment for its staff, and at the same time reduces exposure to labour employment risks, as well as effectively eliminates the use of child and forced labour.

The Group is implementing the five-day week and eight-hour day working arrangement. Its staff members enjoy all holidays set by the State and local governments and are entitled to paid leaves ranging from 5 to 15 days depending on their years of service. Employees of the Group are entitled to “5 Insurances and Housing Fund” and other benefits. The Group has also provided commercial health insurance and accident insurance to provide better assurance to our employees.

The Group is implementing a master budget management regarding staff remuneration, which constitutes a performance-based reward system that can effectively motivate the staff to make positive contribution to the Group. An incentive scheme linking the remuneration of the management to the Group’s performance is established which forms a floating mechanism for the remuneration of the management.

The Group places high importance on the career development of its staff and provides sufficient room for development. Staff can seek development in two ways: promotion to management positions or transfer to technical positions through enrichment of professional expertise.

II. WORKING ENVIRONMENT (continued)

1. Corporate environment (continued)

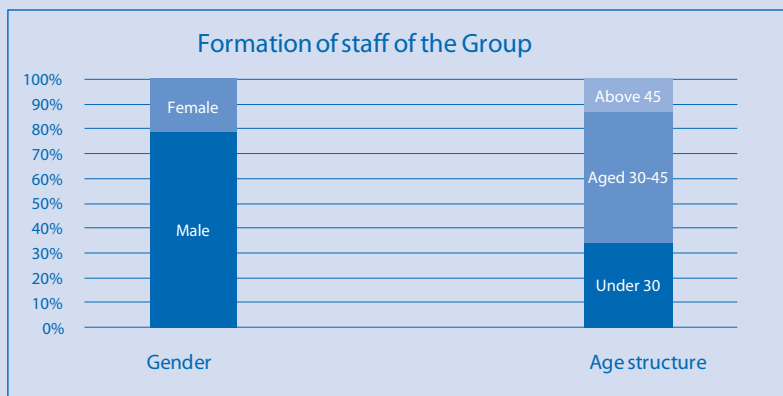
As of March 2017, the Group had a total workforce of 267 employees. The formation of our staff was as follow:

Table 1 — Staff of the Group (By duty and education background)

By duty	Number of staff	By education background	Number of staff
Senior management	9	Master degree	24
Corporate management	36	Bachelor degree	123
Professional technicians	20	Tertiary (non-degree)	98
General staff	202	Below tertiary	22

Table 2 — Staff of the Group (By gender and age)

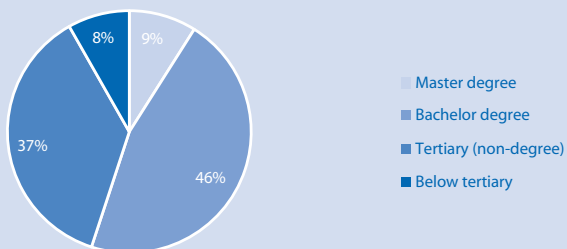
Items	By gender		By age		
	Male	Female	Under 30	Aged 30-45	Above 45
Number of staff	211	56	92	140	35
Staff turnover	9	2	5	4	2



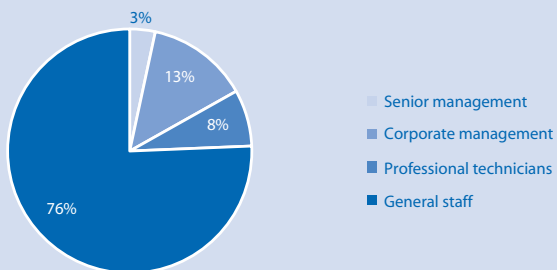
II. WORKING ENVIRONMENT (continued)

1. Corporate environment (continued)

Staff of the Group (By education background)

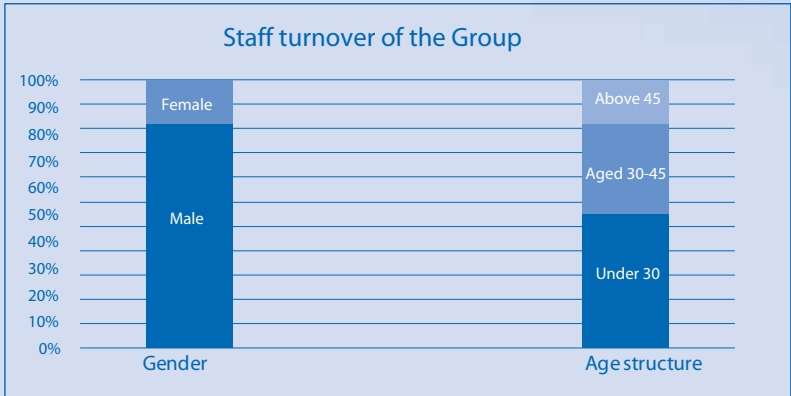


Staff of the Group (By duty)



II. WORKING ENVIRONMENT (continued)

1. Corporate environment (continued)



II. WORKING ENVIRONMENT (continued)

2. Staff health and safety

The Group attaches great importance to the health and safety of our staff members. Each subsidiary has set up a regulatory system for production safety and occupational disease prevention and control. Specific department is assigned to oversee production safety, striving to create a safe working environment for the Group's staff members and keep them out of occupational health hazards.

The Group insists on the policy of "placing safety on top priority, taking precaution as the main task and providing comprehensive treatment", we continue to emphasise major responsibilities in ensuring production safety. Promotion, education and training on production safety were conducted extensively. New staff will receive safety education upon joining our Group. We continued to work on meeting the targets of standardisation of production safety. Large-scale inspections on production safety are performed regularly to eliminate any potential hazards in a timely manner. Generally, the Group arranges regular medical checkups for staff members once every year. These measures have enhanced our level of occupational health and safety and environmental management.

In 2016, no death and serious injury cases in relation to safe production occurred in the Group. We have maintained a stable position regarding production safety. The overall performance for safety and environmental protection was further enhanced.

3. Staff development

In 2016, the Group made solid progress in opening up a new landscape of human resources development and management. It has also promoted standardisation, professionalism, marketisation and globalisation of our pool of talents. The basic work of human resources management was enhanced so as to further strengthen the training of human resources. New initiatives adopted for our main tasks were as follows:

II. WORKING ENVIRONMENT (continued)

3. Staff development (continued)

- (1) Implemented the talent strategy to further enhance the training of talents and strove to build up a high technology talent team in sufficient quantity with strong technical skills and fine work style.
- (2) Deepened three systematic reforms. In 2016, based on the “fixed position, fixed schedule, fixed staff” scheme, benchmarking other advanced enterprises in the same industry in the PRC and taking into consideration of the performance assessment of all staff, the Group has adopted a dynamic management approach based on the requirements of positions and the annual performance appraisal results progressively in compliance with the laws and regulations.

4. Employee care

The Group had a well-established system which strictly executes the national regulations and standards. We also educate our staff to enhance safe production and protect occupational health. With a strict safety operation and management system manual and enhanced staff training and management and daily supervision, the effective implementation of quality and safety standardisation and the occupational health and safety management system has been ensured. Also, during the course of implementation, the Company maintained an employer's liability insurance to protect staff's interests. The Group protects and cares for the health of our female staff, improved the staff's working and living environment and provided body check-ups to staff every year. Also, we provided complementary commercial health insurance and medical support, which relieved much of the staff's burden on medical expense. From time to time, the Group held activities to send its warmth of love to staff on their birthdays.

III. ENVIRONMENTAL PROTECTION

As an end LNG supplier dedicated to clean energy, the Group focuses on responding to the state energy utilising policy and the thirteenth five-year plan through the safe and reliable clean energy operation of natural gas, which facilitates the structural adjustment of energy sector in the PRC. The Company has formulated strict environmental protection policy, which helps us to implement the environmental protection concept in various aspects, including product design and packaging, construction and gas operation. Given that the PRC's economy is entering into the "new normal", and under the trend of green, recycling and low-carbon development, there will be considerable development opportunities for the clean energy sector in the PRC.

1. Supply of green energy

The Group actively responds to the state's energy structural adjustment policy and continuously supplies green energy to support urban development. Under the state's thirteenth five-year plan and the energy working report dated 24 May 2011 issued by National Energy Administration, related work of LNG vehicle utilisation and "coal-to-gas" conversion are encouraged. The Company has encouraged industrial users to upgrade their boilers and large furnaces, set up LNG refilling stations for vehicles which use gas as fuel and implemented "coal-to-gas" conversion and petrol to gas in vehicles in order to promote energy saving and emission reduction and utilisation of clean and highly efficient natural gas energy. Meanwhile, the Group has actively explored catering market to attract more commercial customers to use natural gas. In recent years, the Group has made substantial investment in the building of LNG gasification stations and promoted natural gas for industrial use to reduce air pollution.

1.1. Typical characteristics of LNG, a clean fuel

Diesel is a traditional fuel while LNG, a clean fuel, has the typical characteristics of low temperature, which is a kind of colorless, odorless and non-toxic natural gas cooled to -162°C under normal gas pressure by condensation and removing impurities. During the LNG formation process, impurities, CO_2 , sulfur, water and acidic materials are filtered, making LNG clean and clear. LNG is stored in double-layer insulated vacuum tank. When heated, the temperature of LNG will rise quickly and the LNG will gasify. Such gas can be burnt and used as the fuel of natural gas engine. The ignition point of LNG is 645°C , which is safer when compared with the ignition point of diesel at 220°C .

III. ENVIRONMENTAL PROTECTION (continued)

1. Supply of green energy (continued)

1.2 Comparison before and after "coal-to-gas" conversion of boiler or furnace

Product Items	Natural gas (Nm ³)	Standard coal (kg)	Crude oil (Kg)
Emission of CO ₂	1.885kg	3.6kg	3.1kg
Production of 10,000Kcal. energy	2.26kg	5.14kg	3.37kg

Comparing with coal and oil, carbon emission volume obviously reduces. Comparing with coal, 1Nm³ natural gas can reduce emission of carbon dioxide by 1.715kg and also deleterious impurities such as sulfur dioxide.

1.3 Emission level of pollutants of using LNG vs diesel for vehicles and vessels

The test was conducted under the same operation condition. Two 10-meter-long buses were chosen for the test, one with China III emission standard ("China III") LNG engine and the other with China III diesel engine. In order to get the fuel consumption rate for every 100 kilometers and examine the emission of pollutants, the two vehicles were tested on the same road section. The following table 1 sets out the emission level of pollutants of such two kinds of fuel, namely LNG, the clean fuel, and diesel, the traditional fuel:

III. ENVIRONMENTAL PROTECTION (continued)

1. Supply of green energy (continued)

1.3 Emission level of pollutants of using LNG vs diesel for vehicles and vessels (continued)

Table 1: Emission level of pollutants of two kinds of fuel

	YC6G240-30 (China III emission standard diesel engine) (g/kw/h)		YC6G260N-30 (China III emission standard LNG engine) (g/kw/h)		Reduction of emission level of pollutants	
	Standard	Examination result	Standard	Examination result		
		A		B	(A-B)/A	
CO	2.1	0.78	CO	5.45	0.008	98.97%
HC	0.66	0.18	NMHC	0.78	0.03	83.33%
NOX	5.0	4.33	NOX	5.0	2.99	30.95%
PM	0.1	0.087	PM	0.16	0	Zero emission
Smoke M-1 (M-1 light absorption coefficient)	0.8	0.192	CH4	1.6	1.18	

According to the examination result set out in the above table, the difference of emission level of pollutants between LNG, the clean fuel, and diesel, the traditional fuel, is as follows:

CO drops by 98.97%;

HC and NMHC drop by 83.33%; NOX drops by 30.95%;

Zero emission of PM and zero emission of smoke and dust;

Basically, the emission of LNG does not contain hazardous substances, including lead dust, sulfides and benzene. Clearly, LNG is a cleaner fuel as compared to the traditional fuel diesel.

III. ENVIRONMENTAL PROTECTION (continued)

1. Supply of green energy (continued)

1.4 Environmental-friendly nature of LNG

According to the above pollutant emission test of LNG, the clean fuel, and diesel, the traditional fuel, taking a 10-meter-long vehicle in compliance with Euro III emission standard as an example, the emission level of carbon and other pollutants per kilometer of the one fueled with LNG is 80 grams and 11.6 grams lower than that fueled with diesel, the traditional fuel, respectively. Emission can be reduced by approximately 10 tons, of which carbon and other pollutants account for 8 tons and more than 1 ton respectively, on the basis that a bus travels 100,000 kilometers per year.

In April 2017, the Group's current point-to-point supply of gas was 2,292,751m³, reducing emission of carbon dioxide, sulfur dioxide, smoke and dust, as well as nitrogen oxide by 2,372.348 tons, 25.47 tons, 15.92 tons and 12.10 tons respectively for LNG users.

The Group's LNG trading volume for the month was 6,005.2 tons, reducing emission of carbon dioxide, sulfur dioxide, smoke and dust, as well as nitrogen oxide by 11,900.48 tons, 127.79 tons, 79.87 tons and 60.70 tons respectively for LNG end-users.

As natural gas is an environmental-friendly product, there is no pollution when using natural gas. If any hazardous waste is produced, the Group will dispose of such waste in accordance with the requirements under the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes.

The Group has imposed controlling requirements in respect of environmental protection for member companies: 1. meeting the second-level standard of the prevailing Ambient Air Quality Standards; 2. meeting the IV type standard of the prevailing Environmental Quality Standard for Surface Water; 3. meeting the 2~4 type standard of the prevailing Environmental Noise Standard for Urban Region; 4. meeting the third-level standard of Discharge Limits of Water Pollutants of the PRC.

III. ENVIRONMENTAL PROTECTION (continued)

2. Prevention of construction pollution

Before construction, the Company prepares the planning for gas stations and pipelines with the local government, and makes adjustment from time to time based on actual needs. We try to consolidate different functionalities in a gas station as far as possible so as to save the land resources. For high-pressure pipelines, we conduct hydrogeological survey and pipeline routing optimization in advance, as well as other preliminary preparation, including geo-hazard assessment, environment assessment, of soil and water conservation resolution. Also, we test and monitor the dust, noise, and solid waste in the construction site to minimize the harmful effect to local natural environment. During construction, the Company takes various effective measures, including cleaning the tyres of construction vehicles, centralising the disposal of waste water and mud generating from the construction, applying sound absorbing and insulation technique, in order to avoid air, water and noise pollutions during the construction and minimise the harmful effect to the nearby natural environment.

3. Effective use of resources, e.g. water and electricity

Point-to-point LNG supply project invested by the Group is a more mature technology. Storage tanks and carburetors are supplied by first-tier brands in the PRC, adopting connections by steel pipelines, sealed with 304 stainless steel metal washers at the joints to ensure no gas leakage. During the process of gas supply, as it involves only physical change of LNG from liquid state to gas state, no pollutant is created and no natural resources, such as water and electricity, is used. Only a low-power-consuming meter, equipment for monitoring the operation of the plant and equipment, is needed for data transfer purpose.

4. Promoting environmental protection activities

Each project company of the Group actively organised numerous types of environmental friendly activities such as tree plantation and cycling to promote the concept of environmental protection. The Group invited all staff and customers to support its environmental protection initiatives through various activities such as green planting, paperless office and low-carbon travel.

IV. SOCIAL PARTICIPATION

1. Responsibility management

The Group adheres to the principle of actively assuming corporate responsibility to enhance corporate responsibility awareness, perform its own social responsibilities and disclose relevant information to the public. The Group endeavours to achieve its goal of “Tackling with smog, Improving environment”:

- (1) *Nurturing and gradually incorporating the concept of corporate social responsibilities into different areas of production and operation of the enterprise*

Over the short period of 2 years since the establishment of the Company, we actively responded to the state’s environmental protection policy, promoted the highly effective utilisation of natural gas and development of environmental protection business, gradually deployed LNG utilisation in every province and city for industrial corporate users and provided perfect supply chain system, which formed a circulated and healthy clean energy industry, greatly reduced emission level of pollutants, fulfilled corporate social responsibility and created a sound corporate image in society. The Group adhered to its concept of “Tackling with smog, Improving environment” and suggested guidelines to promote the development of clean energy and environmental protection business in the PRC.

- (2) *Participating in the establishment of public association and platform*

The Group established a fundamental platform for the communication with stakeholders, which improved public image and presence of the corporation. The Group maintained prompt communication with stakeholders, through issuing documents such as “Environmental, Social and Governance Report” and timely disclosure of important information, to accomplish its social responsibilities to stakeholders, (such as shareholders, employees, users, media and the community) and natural environment. The above effort showed dedication of the Group to “Tackling with smog, Improving environment”.

IV. SOCIAL PARTICIPATION (continued)

2. Community activities

- (1) On 17 March 2016, the Company successfully held a press conference on “Preferential Policy for Natural Gas Vehicles of Logistics Companies in Shanghai for the Year 2016” in Shanghai;
- (2) On 24 September 2016, the Company participated in the Canoeing Competition organized by Pudong World Expo Park Management Committee, China (Shanghai) Pilot Free Trade Zone.