

## Project Summary Information (PSI)

Project No: 000037

Project Name	Beijing Air Quality Improvement and Coal Replacement Project (the Project)
Country	People's Republic of China
Sector	Energy – natural gas distribution
Project No.	000037
Borrower	Beijing Gas Group Company Limited (Beijing Gas)
Implementation Agencies	Beijing Gas
Environmental and Social Category	Category B
Date of PSI prepared or updated	December 9, 2017
Date of Concept Review	July 3, 2017
Date of Final Review	November 6, 2017
Date of Board Approval	December 8, 2017

### I. Introduction

China is now facing one of the biggest environmental challenges in the world. Environmental degradation has been serious, costing China roughly 3% - 10% of its gross domestic product (GDP) per various estimates, of which air pollution accounts for a big share. This challenge, if not properly addressed, will negatively affect the sustainability of China's economic growth in the long run. Due to the constraints of its natural resource endowments, China is heavily dependent on coal to fuel its economic growth. Pollutants stemming from coal combustion have been a major source of air pollution and the fifth largest cause of premature deaths in China.<sup>1</sup> Investigations show that in rural areas of Beijing, households have been relying on burning coal for cooking and heating, which contributes about 14.4%-18.5% of emissions of total particulate matters less than 2.5 microns in diameter (PM2.5) in Beijing. To help improve air quality and reduce pollutions related to coal combustion, there is an urgent need to replace coal with cleaner fuel, such as natural gas, in the rural areas of Beijing. The proposed Project is designed to improve air quality and reduce CO<sub>2</sub> emissions by replacing dirty coal with cleaner natural gas in the rural areas of Beijing. Given its nature of public benefits, the Project has been strongly supported by the Beijing Municipality. The Bank's financing support will help reduce the Project's financing uncertainty and enhance the Project's financial viability.

### II. Project Objectives and Expected Results

The objective of the Project is to improve air quality and reduce air pollutions, such as CO<sub>2</sub> emissions, particulate matters, SO<sub>2</sub> emissions, and NO<sub>x</sub> emissions, through replacing coal with natural gas in rural villages in outskirts of Beijing. Upon completion, the Project will provide gas service connections to approximately 216,751 rural households, and reduce coal consumption of around 650,000 tons annually in Beijing.

---

<sup>1</sup> Health Effects Institute and Tsinghua University, 2016. Air Pollution from Coal A Major Source of Health Burden in China. Boston.

### **III. Project Description**

The proposed Project will finance the construction of natural gas distribution networks in around 510 rural villages of Beijing, including the installation of low-pressure village gas pipelines, household connections, and household gas consumption meters. Upon completion, the Project will bring large economic and environmental benefits, including annual energy savings of around 113,000 tons of standard coal equivalent. Net of emissions of burning natural gas, the Project is estimated annually to reduce CO<sub>2</sub> emissions by 595,700 tons, PM2.5 by 3,700 tons, SO<sub>2</sub> emissions by 1,488 tons, and NO<sub>x</sub> emissions by 4,442 tons. The Project will also have a substantial social impact. After coal consumption is eliminated in rural villages, ambient air quality and the quality of the environment in Beijing will improve, helping to mitigate the risk of respiratory diseases, cardiovascular disease, and ischemic heart disease. The most vulnerable people to such adverse effects in both rural and urban Beijing, such as children, women, the sick and the elderly, will benefit most.

### **IV. Environmental and Social**

Per the Bank's Environmental and Social Policy, the Project is assigned as Category B. As part of Project preparation, the environmental and social impacts were assessed and mitigation measures proposed in an Environmental and Social Management Plan (ESMP). Women and children are considered to be the major beneficiaries of coal-to-gas conversion, due to improvements in both outdoor and indoor air quality and the change of cooking fuel to clean energy. In addition, residents from project villages or nearby can be hired for construction activities.

The Bank's environmental and social due diligence, including review of project information and the ESMP, site visits, and meetings with the client and their consultant, indicated that there will not be any land acquisition or displacement of population in the Project areas. Environmental impacts associated with the Project during construction will be limited and temporary, and not irreversible in nature, and relevant mitigation measures are well-known and available. These risks and impacts can be addressed through the implementation of the ESMP and good international practice. During Project preparation, public consultations were carried out and information was disclosed, per national and the Bank requirements. The ESMP has been disclosed on the website of Beijing Gas (<http://www.bjgas.com/Thematic.ashx?newsid=6226>) and of the Bank's website (<https://www.aiib.org/en/projects/proposed/2017/download/beijing/environment-social-management-plan.pdf>).

Beijing Gas, as the dominant gas supplier in Beijing, has been implementing a coal-to-gas conversion program for several years. It has an existing Grievance Redress Mechanism (GRM) and Hot Line Service in place for daily operation issues and complaint handling, from municipal level to district branches. This GRM system will be used to respond to any grievances that are raised in relation to the Project. In addition, contractors will be requested to set up their own GRM handling and reporting system to ensure all concerns are dealt with in a consistent and transparent manner.

### **V. Estimated Project Cost and Financing Source**

The Project is estimated to cost US\$761.10 million (or RMB 5,099.37 million equivalent<sup>2</sup>) as per available information. Upon Beijing Gas' request, the Bank is considering to provide a non-sovereign-

---

<sup>2</sup> Exchange Rate: US\$1 = RMB6.7.

backed loan of US\$250 million to finance the Project. The following table shows the cost estimates and financing plan of the Project.

<b>Sources</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
AIIB	250.00	32.85
Beijing Municipality	228.33	30.00
China CDM Fund	30.00	3.94
Beijing Gas	252.77	33.21
<b>Total</b>	<b>761.10</b>	<b>100.0</b>

## **VI. Implementation**

The Project will be implemented over 4 years between July 1, 2017 and June 30, 2021, and the loan closing date will be December 31, 2021.

Beijing Gas was established for a business purpose and operates on a commercial basis. All procurement decisions for procurement planning, tendering and contract administration are reviewed and approved by its own management. Beijing Gas, from procurement view, is considered as a private entity, and the Bank's procurement policy for Private Entity (section III of Procurement Instrument for Recipient dated June 2, 2016) will apply.

### **Contact Points**

#### **Bank:**

Hongliang Yang  
Team Leader/Senior Investment Operations Specialist  
Department of Investment Operation  
Asian Infrastructure Investment Bank  
Email: [hyang@aiib.org](mailto:hyang@aiib.org)

#### **Borrower:**

Kang Yan  
Manager  
Finance Department  
Beijing Gas  
Email: [Kangyan@bjgas.com](mailto:Kangyan@bjgas.com)