

SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

Country:	People’s Republic of China	Project Title:	Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Henan Cleaner Fuel Switch Investment Program
Lending/Financing Modality:	Project Loan/RBL	Department/Division:	East Asia Department/Sustainable Infrastructure Division

I. POVERTY AND SOCIAL ANALYSIS AND STRATEGY
Poverty targeting: general intervention
A. Links to the National Poverty Reduction and Inclusive Growth Strategy and Country Partnership Strategy The proposed program aims to improve air quality in Henan Province by supporting the switch from coal to gas for residential, commercial, and industrial use. Henan Province is one of the major contributor to pollution in the greater Beijing–Tianjin–Hebei Region. The program is aligned with the PRC’s Action Plan on Air Pollution Prevention and Control. It supports the Thirteenth Five-Year-Plan (2016–2020) by accelerating low carbon transformation and environmental improvement. ^a The program also supports the Poverty Reduction Program for China’s Rural Areas (2011–2020), which promotes poverty reduction through environmentally friendly urbanization and balanced resource allocation. ^b The program will contribute to realizing the Three-Year Action Plan for Henan Province to Combat The Blue Sky War (2018–2020). ^c The program is aligned with ADB’s country partnership strategy for the PRC, 2016–2020 ^d and supports managing climate change and the environment.
B. Results from the Poverty and Social Analysis during Assessments of the Program and its Systems
<p>1. Key poverty and social issues. Henan is among the PRC’s most populous provinces with 109.06 million inhabitants. Most low-income households are concentrated in rural areas. Despite pollution reduction policies, rural households, particularly the poorest, continue to use coal and wood as fuel for heating and cooking stoves. This has serious repercussions in terms of: (i) poor indoor air quality, which causes respiratory diseases; (ii) increased mortality because of carbon monoxide poisoning; (iii) fire-related injuries; and (iv) high fuel expenditures on coal. Rural households, especially poor households, tend to lack connections to the natural gas network as they cannot afford the initial installation fee. LPG and electricity have gradually become cleaner energy options in rural areas; however, the annual fuel expenditure for LPG is about 40% higher than for natural gas, while electric stoves are less satisfying for rural household that prefer stoves with visible flames.</p> <p>2. Beneficiaries. According to a market survey conducted by Tianlun Natural Gas Company, an estimated 10 million rural households in the province could switch to cleaner fuels; of these, 8.35 million households have the prerequisites for connecting to natural gas. The last-meter connection cost ranges from CNY3,000 to CNY4,000 per household, and is a primary barrier for connecting to natural gas. The proposed program would target 80 of the less developed counties in the province; these are located near the major national natural gas transmission pipelines, and 53 are designated as poor counties. The program will benefit 1.2 million residential, commercial, and industrial customers (or about 4.8 million people,^e including about 14,520^f poor households directly through access to cleaner, safer and more affordable energy). Industrial and commercial customers in the program area will also benefit from the connection to the natural gas network system. In addition, the program will benefit about 37,182 households (or 148,728 people),^g including about 450 poor households located near the pilot biogas plant, through raw agricultural waste supply. Overall, the number of direct beneficiaries is estimated at 1.24 million households (4.95 million people), including about 14,970 poor households.</p> <p>3. Impact channels. The program will (i) install 26,880 kilometers of gas transmission and distribution pipeline and provide end-pipe natural gas connections to 1.2 million customers at no cost, accounting for 11.78% of the total estimated rural households in the province—the last-meter connection cost that will be waived by the program ranges from 20% to 25% of the annual income of poor households;^h (ii) build a pilot biogas plant to develop alternative clean fuel as a supplement; and (iii) stimulate a change in the traditional fuel use behaviors of various end-user groups through the awareness campaign for the safe use of natural gas. The program will deliver the following benefits to households: (i) reduce domestic fuel expenditure (estimated average savings of CNY340/year); (ii) time savings as a result of more efficient cooking and heating, which will benefit women in particular, estimated at 1.91 hours/day; (iii) improved respiratory health; (iv) enhanced cleaner fuel safety use awareness; (v) reduced fire related accidents; and (vi) increased income through job opportunities created by the program. About 14,970 poor households will benefit from selling agricultural waste to the biogas plant.</p> <p>4. Other social and poverty issues. Concerns raised by rural people include: (i) affordability of the natural gas stoves, specifically for poor households; (ii) difficulties in using e-payment among the elderly, especially those who live alone. Survey results indicate that 44% of the elderly and 18% of the poor would prefer direct payment at home, due to mobility concerns, low digital literacy, and transport costs to reach payment centers.</p> <p>5. Design features. The program is designed to (i) provide cleaner and more affordable energy to suburban and rural people; (ii) provide free-or-charge last-mile household connection; (iii) address gas fuel safety use awareness through a large-scale campaign for customers that will reduce gas leakage and enhance knowledge of gas safety use; and (iv) address gender stereotyping through a gender-sensitive approach in the fuel-switch safety campaign.</p>
II. PARTICIPATION AND EMPOWERING THE POOR
1. Participatory approaches and proposed program activities. Fifteen focused group discussions with various end-user groups (existing customers, women, teenagers, elderly people, men and poor people) and a household

<p>questionnaire survey covering 507 interviewees (50.5% were women) were conducted in the program area. Beneficiary communities and the general public indicated a high level of support and interest in connecting to the natural gas supply system (94%), participating in the cleaner fuel safety use awareness campaign (95%), and supporting construction of the biogas plant (93%). Almost all the existing customers (98%) who have connected to the natural gas system in the previous program reported being satisfied. Overall, there is a very high level of public support for the program. In addition, a gender-sensitive ACP has been prepared by the implementing agency and will be implemented to ensure that the awareness of diverse customers regarding cleaner fuel use is enhanced, and that women fully participate in consultations during program implementation and operation.</p> <p>2. If civil society has a specific role in the program, summarize the actions taken to ensure their participation. Civil society has no specific role. The implementing agencies communicate directly with the beneficiaries.</p> <p>3. Civil society organizations. The program will not involve civil society organizations in program implementation.</p> <p>4. Forms of civil society organization envisaged during program implementation. The following forms of civil society organization participation are envisaged during program implementation, rated as high (H), medium (M), low (L), or not applicable (NA): <input checked="" type="checkbox"/> Information gathering and sharing (L) <input checked="" type="checkbox"/> Consultation (L) <input type="checkbox"/> Collaboration <input type="checkbox"/> Partnership</p> <p>5. Participation plan. <input type="checkbox"/> Yes. <input checked="" type="checkbox"/> No.</p>	
III. GENDER AND DEVELOPMENT	
Gender mainstreaming category: effective gender mainstreaming	
A. Key issues	
<p>The gender assessment indicates that women are mainly responsible for carrying out tasks related to household energy production and use, such as for heating (86%), cooking (80%), and boiling water for bathing children and elderly during winter (76%). A large number of rural households in Henan (and particularly poorer households) continue to use a mix of fuels including LPG, coal and firewood for cooking and heating. Among households that use mixed fuels, women spend on average 1.90 hours/day on the preparation of coal and firewood for cooking and heating. According to the survey, the purchase of appliances, such as stoves, is decided jointly between husband and wife in a majority of households (63%); in 18% of cases husbands decided alone, and in 11% wives decide. For recurrent expenditures, such as fuel payments, 30% of women indicated making the decision and 12% directly made the payments. The gas company reports that women constitute about 80% of those making payments for gas services at payment centers. The average time for bill payment, including travel time, is 2 hours. Over 50% of women surveyed would prefer to pay online, and 20% at village centers. Women are highly interested in the potential of natural gas to save money and time. Their main concerns include safety and cost of connection and stove. Women surveyed expressed interest in jobs to be created by the project.</p>	
B. Key actions. <input checked="" type="checkbox"/> Gender action plan <input checked="" type="checkbox"/> Program Action Plan <input type="checkbox"/> No action or measure	
<p>To address findings, the proposed program will (i) reduce end-users connection costs by providing last-meter connections at no cost; (ii) implement a large-scale safety information and communication campaign targeting the various population segments (women, men, elderly and children) and ensuring that at least 50% of participants are women; (iii) establish measures to increase affordability for the poorest households, which need support to purchase stoves by reducing the upfront cost of stove purchase through interest-free installment payments; (iv) promote and set targets for women in technical jobs created by the program; (v) establish online and service center payment options; (vi) ensure benefits for women from raw material collection for the biogas plant; and (vii) strictly uphold labor standards. Furthermore, the safety awareness campaign will aim to positively portray men and women in the context of household energy tasks to address stereotyping and promote equal sharing of household responsibilities. One of the key gender-related benefits expected from the program is the large reduction in time spent by rural women in fuel preparation for cooking and heating. The RBL program includes two gender-related DLIs.</p>	
IV. ADDRESSING SOCIAL SAFEGUARD ISSUES	
A. Involuntary Resettlement	
Safeguard Category: <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI	
1. Key impacts.	
<p>For output 1, laying out of distribution pipelines will result in temporary land occupation impacts. Construction of storage substations will require acquisition of collective land or procurement of state-owned land. In the event that collective land has to be acquired for the storage substations, considering the size of the regulatory and storage facility in semi-urban and rural areas, the involuntary resettlement and land acquisition impacts are deemed <i>less significant</i>. For output 2, collective land acquisition will be induced by construction of pilot biogas plant. The site for the biogas plant has been selected and classified as Category B for resettlement. These components will trigger involuntary resettlement impacts, but outputs 3 and 4 will not. The program is estimated to require (i) acquisition of 2.3 <i>mu</i> of land for each gas station under output 1, and (ii) 105.66 <i>mu</i> for the pilot biogas plant.¹</p>	
2. Strategy to address the impacts.	
<p>The program action plan includes safeguards measures to address risks or impacts. This includes adoption of social safeguard technical guidelines to guide the executing and implementing agencies in resettlement plan and DDR preparation, implementation and monitoring; establishment of a safeguard unit and recruitment of qualified staff; and provision of a safeguard workshop to improve the capacity of staff responsible for social safeguards.</p>	
3. Plan or other Actions	
<input type="checkbox"/> Resettlement plan (RP) <input type="checkbox"/> Resettlement framework (RF) <input checked="" type="checkbox"/> Program Action Plan (PAP) and Program Safeguard Systems Assessment (PSSA) <input checked="" type="checkbox"/> Social Safeguard Technical Guideline	
B. Indigenous Peoples	
Safeguard Category: <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> FI	

<p>1. Key impacts. The population of Henan Province is predominantly Han, with Hui minorities living in some urban areas. The Hui ethnic minorities are well integrated and there are no socioeconomic differences between them and the Han population. Is broad community support triggered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>2. Strategy to address the impacts. The program's key principle for site selection for the pilot biogas plant and substation includes avoidance of concentrated ethnic minority communities. For gas distribution pipelines, impacts on structures will be avoided.</p> <p>3. Plan or other actions. <input type="checkbox"/> Indigenous peoples plan <input checked="" type="checkbox"/> No action</p>
V. ADDRESSING OTHER SOCIAL RISKS
A. Risks in the Labor Market
<p>1. Relevance of the program for the country's or region's or sector's labor market. <input type="checkbox"/> unemployment <input type="checkbox"/> underemployment <input type="checkbox"/> retrenchment <input checked="" type="checkbox"/> core labor standards (L)</p> <p>2. Labor market impact. There is an expected low risk that the program may fail to adhere to labor standards, and an assurance on labor standards is included in the program agreement. There will be no labor retrenchment. The program will generate a total of 246 job opportunities for local people, including 128 job during construction, and 118 jobs during operation.</p>
B. Affordability
<p>According to the social survey results, among the poor households, 81.05% of the poor households are willing to connect and could afford the stove, and 18.95% of the poor households said they are not willing to connect. Of these, 63.16% indicated that the main reason for considering not connecting is the cost of the stove, which is beyond their means. This indicates that among poor households, 11.97% cannot afford the stove and need support. The implementing agency will address affordability by providing interest-free installment payments for the natural gas stove purchases for poorer households (those living under the government's minimum living allowance, estimated at around CNY1,700 per month). To reduce costs and facilitate payment options among customers with special needs, such as the elderly, door-to-door fee collection service will also be established. According to the social survey, the annual energy cost accounts for 8% of the expenditures of poor households. Upon program completion, the average fuel cost per household will be reduced by 27.12%, or CNY340 to ensure affordability.</p>
C. Communicable Diseases and Other Social Risks
<p>1. The impact of the following risks are rated as high (H), medium (M), low (L), or not applicable (NA): <input checked="" type="checkbox"/> Communicable diseases (L) <input type="checkbox"/> Human trafficking <input type="checkbox"/> Others (please specify) _____</p> <p>2. Risks to people in program area. Assurance to prevent communicable diseases is included in the environment safeguard technical guideline.</p>
VI. MONITORING AND EVALUATION
<p>1. Targets and indicators. The main monitoring indicators include (i) at least 50% of participants in 500 gender-sensitive cleaner fuel use awareness outreach programs are women; (ii) women constitute at least 30% of new staff employed in technical positions; (iii) the number of poor households benefiting from measures to reduce the upfront cost of stove purchase, including the number headed by women.</p> <p>2. Required human resources. The PMO and implementing agency will set up a safeguards social and awareness unit with qualified staff to coordinate environment and social safeguards, and gender and awareness program-related issues during project implementation, and appoint staff for resettlement plan, resettlement framework, GAP and ACP implementation.</p> <p>3. PAP: includes a description of the program's social, poverty and gender dimensions, monitoring arrangements, PRF, program safeguard actions, and social and gender risks and mitigating measures.</p> <p>4. Monitoring tools. Monitoring reports will be prepared and submitted to ADB. The targets, indicators, and monitoring methodologies are presented in the resettlement plan, Social Safeguard Technical Guidelines, GAP, ACP and PRF.</p>

ADB = Asian Development Bank, ACP = awareness campaign program, DDR = due diligence report, DLI = disbursement-linked indicators, GAP = gender action plan, LPG = liquefied petroleum gas, PMO = program management office, PRC = People's Republic of China, PAP = program action plan, PRF = program results framework.

^a State Council. 2016. *Thirteenth Five-Year-Plan*. Beijing.

^b State Council. 2011. *Poverty Reduction Program for China's Rural Areas*. Beijing.

^c Henan Development and Reform Commission. 2018. *Three-Year Action Plan for Henan Province to Combat the Blue Sky War*. Zhengzhou.

^d ADB. 2016. *Country Partnership Strategy: People's Republic of China, 2016–2020—Transforming Partnership: People's Republic of China and Asian Development Bank*. Manila.

^e The average family size is four people per household according to the social survey.

^f Poor households include households whose annual per capita income is lower than the provincial minimum living standard, which is CNY3,210. As the actual program area has not been determined during this period, it is calculated according to the poverty rate of Henan Province, which was 1.21% in 2018.

^g Zhongyuan Yuzi Investment Holding Group. 2019. *The Henan Rural Area Cleaner Fuel Switch medium- and long-term Investment Program for 2018–2030*. Zhengzhou. It estimates the biogas plant could use the waste from 0.15 million *mu* of corn production annually. Average land area per household is 4.04 *mu* according to the social survey.

^h The average annual income per household is CNY15,762 according to the social survey of poor households.

ⁱ *Mu* is a Chinese unit of measurement by representing 1 *mu* for 666.67 m².

Source: Asian Development Bank.