

**Asian Infrastructure Investment Bank (AIIB)**

**People's Republic of China**

**Beijing-Tianjin-Hebei Low Carbon Energy Transition and Air Quality  
Improvement Project**

**Resettlement Action Plan & Social Assessment for Gas Transmission**

**- Associated Facility of the Project**

**Beijing Gas Group Co., Ltd. (Beijing Gas)**

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### Abbreviations

AAOV	-	Average Annual Output Value
AIIB	-	Asian Infrastructure Investment Bank
AH	-	Affected Household
AP	-	Affected Person
DMS	-	Detailed Measurement Survey
ESF	-	Environmental and Social Framework
ESP	-	Environmental and Social Policy
ESS	-	Environmental and Social Standards
FGD	-	Focus Group Discussion
HD	-	House Demolition
IA	-	Implementing Agency
LA	-	Land Acquisition
LEF	-	Land-expropriated Farmer
LNG	-	Liquefied Natural Gas
M&E	-	Monitoring and Evaluation
MLS	-	Minimum Living Security
PMO	-	Project Management Office
PRC	-	People's Republic of China
RIB	-	Resettlement Information Booklet
RAP	-	Resettlement Action Plan

### Units

Currency unit	=	Yuan (CNY)
1.00 yuan	=	\$0.15
1 hectare	=	15 mu

## Overview of the Environmental and Social Framework of AIIB

The resettlement plan is mainly compiled according to the relevant requirements of the ESF of the AIIB. The relevant requirements of the ESF include the following aspects:

### 1. Basic Concepts and Stipulations in the ESF

• **Client** means the recipient of the Bank financing for a Project and any other entity responsible for implementation of the Project.

• **Project** means the specific set of activities for which the Bank financing is provided, as defined in the agreement governing such financing, regardless of the financing instrument or the source of such financing or whether the Project is financed in whole or in part by the Bank.

The ESP includes:

• **Environmental and Social Policy.** An environmental and social policy (ESP), which sets forth mandatory environmental and social requirements for each Project.

• **Environmental and Social Standards.** The following three associated environmental and social standards (ESSs), which set out more detailed mandatory environmental and social requirements relating to the following:

ESS 1: Environmental and Social Assessment and Management (ESS 1);

ESS 2: Involuntary Resettlement (ESS 2); and

ESS 3: Indigenous Peoples (ESS 3).

• **Environmental and Social Exclusion List.** An Appendix to the ESP that provides an Environmental and Social Exclusion List.

• **Scope of Application.** The ESP applies to all Projects. The Bank requires each Client to manage the environmental and social risks and impacts associated with its Project in a manner designed to meet the ESP and the applicable ESSs in accordance with the environmental and social management plan (ESMP), and environmental and social management planning framework (ESMPF), as applicable, required for the Project under this ESP and ESSs.

### 2. Project Categorisation

The Bank assigns each proposed Project to one of the following four categories:

• **Category A.** A Project is categorized A if it is likely to have significant adverse environmental and social impacts that are irreversible, cumulative, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject

to physical works and may be temporary or permanent in nature. The Bank requires the Client to conduct an environmental and social impact assessment (ESIA) or equivalent environmental and social assessment, for each Category A Project and to prepare an ESMP or ESMPF, which is included in the ESIA report for the Project. The ESIA for a Category A Project examines the Project's potentially negative and positive environmental and social impacts, compares them with those of feasible alternatives (including the "without Project" situation), and recommends any measures needed to avoid, minimize, mitigate, or compensate for adverse impacts and improve environmental and social performance of the Project.

•**Category B.** A Project is categorized B when: it has a limited number of potentially adverse environmental and social impacts; the impacts are not unprecedented; few if any of them are irreversible or cumulative; they are limited to the Project area; and can be successfully managed using good practice in an operational setting. The Bank requires the Client to conduct an initial review of the environmental and social implications of the Project. On the basis of this review, the Bank, in consultation with the Client, determines the appropriate instrument for the Client to assess the Project's environmental and social risks and impacts, on a case-by-case basis. The Bank may determine that an environmental and social assessment or another similar instrument is appropriate for the Project. The scope of the assessment may vary from Project to Project, but it is narrower than that of the Category A ESIA. As in the case of a Category A Project, the assessment examines the Project's potentially negative and positive environmental impacts and recommends any measures needed to avoid, minimize, mitigate, or compensate for adverse impacts and improve environmental performance of the Project.

•**Category C.** A Project is categorized C when it is likely to have minimal or no adverse environmental and social impacts. The Bank does not require an environmental and social assessment, but does require the Client to conduct a review of the environmental and social implications of the Project.

### 3. Requirements for the ESS

When the Bank has determined, in consultation with the Client, that the Project has potentially adverse environmental or social risks and impacts, it requires the Client:

- To conduct an environmental and social assessment relating to these risks and impacts, and design appropriate measures to avoid, minimize, mitigate, offset or compensate for them, all as required under ESS 1.
- If the Project would result in Involuntary Resettlement,<sup>5</sup> to address this in the social section of the assessment report, complemented by more in-depth coverage, as required under ESS 2. The Client covers Involuntary Resettlement in a resettlement plan or resettlement planning framework (RPF), which is provided to the Bank as a freestanding document, an annex to the assessment report, or incorporated into the report as a recognizable element.

•If the Project would affect Indigenous Peoples,<sup>6</sup> to address this in the social section of the assessment report, complemented by more in-depth coverage, as required under ESS 3. The Client covers impacts on Indigenous Peoples in an Indigenous Peoples plan or Indigenous Peoples planning framework (IPPF), which is as a freestanding document, an annex to the assessment report, or incorporated into the report as a recognizable element.

## 4. Involuntary Resettlement

### **Involuntary Resettlement**

***Involuntary Resettlement*** covers physical displacement (relocation, loss of residential land or loss of shelter) and economic displacement (loss of land or access to land and natural resources; loss of assets or access to assets, income sources or means of livelihood).

The Bank screens each Project to determine whether or not it involves Involuntary Resettlement (which covers both physical and economic displacement, as defined in ESS 2). Where it is not feasible to avoid Involuntary Resettlement, the Client is required to ensure that resettlement activities are conceived and executed as sustainable development programs, providing sufficient resources to enable the persons displaced by the Project to share in Project benefits.

If the Project involves Involuntary Resettlement, the Bank requires the Client to prepare a resettlement plan or RPF (as applicable) that is proportional to the extent and degree of the impacts. The degree of impacts is determined by: (a) the scope of physical and economic displacement; and (b) the vulnerability of the affected people. The resettlement plan or RPF complements the broader coverage of social risks and impacts in the environmental and social assessment and provides specialized guidance to address the specific issues associated with Involuntary Resettlement, including land acquisition, changes in land use rights, displacement and need for livelihood restoration.

The Bank does not endorse illegal settlement; however, it recognizes that significant populations already inhabit both urban and rural land without title or recognized land rights in its countries of operation. Given this situation, the Bank requires the Client to ensure that displaced persons without title to land or any recognizable legal rights to land, are eligible for, and receive, resettlement assistance and compensation for loss of non-land assets, in accordance with cut-off dates established in the resettlement plan, and that they are included in the resettlement consultation process.

### **Associated Facilities.**

***Associated Facilities.*** Associated facilities (Associated Facilities) are activities that are not included in the description of the Project set out in the agreement governing the Project, but that the Bank determines, following consultation with the Client, are: (a) directly and materially related to the Project; (b) carried out or planned to be carried out, contemporaneously with the Project; and (c) necessary for the Project to be viable and would not be constructed or expanded if the Project did

not exist.

***Associated Facilities Controlled or Not Controlled by the Client.*** The Bank requires the Client, as part of its environmental and social assessment, to identify and assess the potential environmental and social risks and impacts of Associated Facilities, as follows:

- To the extent the Client controls or has influence over the Associated Facilities, the Bank requires it to take the following actions: (a) the Client is required to comply with the requirements of the ESP and ESSs with respect to such facilities, to the extent of its control or influence; and (b) if the Associated Facilities are financed by another multilateral development bank or bilateral development organization, the Bank may rely on the requirements of such other development partner in place of all or some of the requirements set out in the ESP and ESSs, provided that, in the Bank's judgment, such requirements do not materially deviate from what would otherwise be required under the ESP and ESSs.

- If the Client does not control or have influence over the Associated Activities, it identifies in the environmental and social assessment the environmental and social risks and impacts the Associated Facilities may present to the Project.

- The Client is required to demonstrate, to the Bank's satisfaction, the extent to which it does not exercise control or have influence over the Associated Facilities by providing details of the relevant considerations, which may include legal, regulatory and institutional factors.

## **5. Involuntary Resettlement Plan**

**Objectives:** To avoid Involuntary Resettlement wherever possible; to minimize Involuntary Resettlement by exploring Project alternatives; where avoidance of Involuntary Resettlement is not feasible, to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-Project levels; to improve the overall socioeconomic status of the displaced poor and other vulnerable groups; and to conceive and implement resettlement activities as sustainable development programs, providing sufficient resources to enable the persons displaced by the Project to share in Project benefits.

**Scope and Application:** ESS 2 applies if the Project's screening process reveals that the Project would involve Involuntary Resettlement (including Involuntary Resettlement of the recent past or foreseeable future that is directly linked to the Project). Involuntary Resettlement covers physical displacement (relocation, loss of residential land or loss of shelter) and economic displacement (loss of land or access to land and natural resources; loss of assets or access to assets, income sources or means of livelihood) as a result of: (a) involuntary acquisition of land; or (b) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers such displacement whether such

losses and involuntary restrictions are full or partial, permanent or temporary.

If adverse environmental, social or economic impacts from Project activities involving loss of access to assets or resources or restrictions on land use that do not fall within the definition of Involuntary Resettlement are identified, such impacts are avoided, or when avoidance is not feasible, they are at least minimized, mitigated, or compensated for, through the environmental and social assessment under ESS 1. If these impacts are found to be adverse at any stage of the Project, the Client is required to develop and implement a management plan to restore the livelihoods of affected persons to at least pre-Project level or better.

**Requirements:** The Client is required to undertake the following actions in relation to the Project:

•**Planning.** Determine the required scope of Involuntary Resettlement planning, through a survey of land and assets, a full census of persons to be displaced, and an evaluation of socioeconomic conditions specifically related to Involuntary Resettlement risks and impacts. This establishes baseline information on assets, productive resources and status of livelihoods. Include consideration of customary rights, collective or communal forms of land tenure. Take gender into account in conducting the above. If Indigenous Peoples are affected, follow the requirements of ESS 3.

•**Resettlement Plan.** Prepare a resettlement plan elaborating on displaced persons' entitlements, income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget and time-bound implementation schedule. Involve affected persons in consultation on the resettlement plan and disclose the draft resettlement documentation in accordance with the *Information Disclosure* bullet below. The resettlement plan complements the broader coverage of social risks and impacts in the environmental and social assessment and provides specialized guidance to address the specific issues associated with Involuntary Resettlement, including land acquisition, changes in land use rights, including customary rights, physical and economic displacement, and potential design adjustments that may reduce resettlement requirements. In some cases, with the Bank's prior approval, resettlement actions may be part of an overall community development plan, where the Client takes special efforts to ensure people who are displaced receive appropriate benefits through such a plan. When displacement is only economic, prepare a livelihood restoration plan. Provide measures to be taken in case of disputes over compensation.

•**Abbreviated Resettlement Plan.** Where impacts on the entire displaced population are minor, or fewer than 200 people are displaced, the Client may, with the prior approval of the Bank, prepare an abbreviated resettlement plan, covering such elements as the Bank may specify. Impacts are considered "minor" if the affected people are not physically displaced and less than 10 percent of their productive assets are lost.

•**Resettlement Planning Framework.** If (a) the Project is likely to involve Involuntary Resettlement but consists of a program or series of activities whose details are not yet identified at the time the Project is approved by the Bank, or (b) in exceptional circumstances, duly justified by

the Client, the Bank determines that the environmental and social assessment of identified Project activities involving Involuntary Resettlement may be conducted using a phased approach under paragraph 50 of the ESP: prepare an RPF. Prepare the resettlement plan or abbreviated resettlement plan, as described in the preceding bullets, as early as possible during development of the activities, in conformity with the RPF approved by the Bank.

•**Proportionality.** Ensure that the resettlement plan or RPF is proportional to the extent and degree of the impacts. The degree of impacts is determined by: (a) the scope of physical and economic displacement; and (b) the vulnerability of the persons to be displaced by the Project.

•**Consultations.** Carry out meaningful consultations with persons to be displaced by the Project, host communities and nongovernmental organizations, and facilitate their informed participation in the consultations. Consult with all persons to be displaced on their rights within the resettlement process, entitlements and resettlement options, and further participation process. Ensure their involvement in planning, implementation, monitoring and evaluation of the resettlement plan. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, Indigenous Peoples and those without legal title to land, and ensure their participation in consultations.

•**Grievance Mechanism.** Establish a suitable grievance redress mechanism to receive and facilitate resolution of the concerns of persons displaced by the Project and inform them of its availability. Scale the grievance mechanism to the risks and impacts of the Involuntary Resettlement. The grievance mechanism may utilize existing formal or informal grievance mechanisms, provided that they are properly designed and implemented, and determined by the Bank to be suitable for the Project; these may be supplemented, as needed, with Project-specific arrangements. Design the mechanism to address displaced persons' concerns and complaints promptly, using an understandable and transparent process that is gender-sensitive, culturally appropriate and readily accessible to all affected people. Include provisions to protect complainants from retaliation and to remain anonymous, if requested. Disclose reports on grievance redress and outcomes in accordance with the *Information Disclosure* bullet below.

•**Social Support.** Support the social and cultural institutions of persons displaced by the Project and their host population to address resettlement. Where Involuntary Resettlement risks and impacts are highly complex and sensitive, consider implementation of a social preparation phase to build the capacity of vulnerable groups to address resettlement issues, consisting of consultation with affected people and the host population before key compensation and resettlement decisions are made. The cost of social preparation is included in the resettlement budget.

•**Livelihood Restoration.** Improve, or at least restore, the livelihoods of all persons displaced by the Project through: (a) where possible, land-based resettlement strategies when affected livelihoods are land-based or where land is collectively owned; or cash compensation at replacement value for land, including transitional costs, when the loss of land does not undermine livelihoods; (b) prompt replacement of assets with assets of equal or higher value; (c) prompt compensation at full replacement cost for assets that cannot be restored; and (d) capacity building programs to support improved use of livelihood resources and enhance access to alternative sources



of livelihood. Include transaction costs in determining compensation. Examine the opportunities for provision of additional revenues and services through benefit-sharing, as the nature and objectives of the Project may allow.

•**Resettlement Assistance.** Provide persons displaced by the Project with needed assistance, including the following: (a) if there is relocation, security of tenure (with tenure rights that are as strong as the rights the displaced persons had to the land or assets from which they have been displaced) of relocation land (and assets, as applicable), proper housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities and extension of Project benefits to host communities to facilitate the resettlement process; (b) transitional support and development assistance, such as land development, credit facilities, training or employment opportunities; and (c) civic infrastructure and community services, as required.

•**Standards of Living.** Improve the standards of living of the poor and other vulnerable groups displaced by the Project, including women, children and persons with disabilities, to at least national minimum standards, including access to social protection systems. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.

•**Persons without Title or Legal Rights.** Ensure that persons displaced by the Project who are without title to land or any recognizable legal rights to land, are eligible for, and receive, resettlement assistance and compensation for loss of non-land assets, in accordance with cut-off dates established in the resettlement plan. Include them in the resettlement consultation process. Do not include compensation to these people for the illegally settled land. Conduct land survey and census as early as possible in Project preparation to establish clear cut-off dates for eligibility and to prevent encroachment. If claims have been made by these displaced persons that are currently under administrative or legal review, develop procedures to address these situations.

•**Negotiated Settlement.** Develop procedures in a transparent, consistent and equitable manner if land acquisition or changes in land use rights are acquired through negotiated settlement under the Project, to ensure that those people who enter into negotiated settlements maintain the same or better income and livelihood status.

•**Information Disclosure.** Disclose the draft resettlement plan, including documentation of the consultation process, in the Project area, in a timely manner in accordance with paragraph 57 of the ESP, in an accessible place, and in a form and language(s) understandable to persons displaced by the Project and other stakeholders. Disclose the final resettlement plan, and any updates to affected persons and other stakeholders in the same manner. Disclose any RPF in the same manner. Regularly disclose updated environmental and social information, along with information on any relevant material changes in the Project.

•**Implementation.** Design and execute Involuntary Resettlement as part of the Project. Include the full costs of resettlement in the presentation of the Project's costs and benefits. For a Project with significant Involuntary Resettlement impacts, consider implementing the Involuntary Resettlement component of the Project as a stand-alone Project.

•**Compensation and Entitlements.** Pay compensation and provide other resettlement entitlements before any physical or economic displacement under the Project.

•**Supervision.** Closely supervise implementation of the resettlement plan throughout Project implementation.

•**Monitoring.** Using suitably qualified and experienced experts, monitor and assess resettlement outcomes under the Project, their impacts on the standards of living of displaced persons and whether the objectives of the resettlement plan have been achieved, by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports in accordance with the *Information Disclosure* bullet above. Consider the use of suitably qualified and experienced third parties to support monitoring programs.

## Executive Summary

### 1. Project description

The Beijing-Tianjin-Hebei Low Carbon Energy Transition and Air Quality Improvement Project (hereinafter referred to as the “Project”) is located in Nangang Industrial Zone, Tianjin Economic-Technological Development Area, Binhai New District, Tianjin Municipality. The Project consists of a LNG receiving station, a wharf and a pipeline, where the LNG receiving station is located east of the east harbor basin of Nangang Industrial Zone, the wharf is located at the north end of the east shoreline of the east harbor basin of Nangang Industrial Zone, and the pipeline runs from the first station in the LNG receiving station, through Tianjin, Hebei and Beijing, and ends at the final station in Daxing District, Beijing, with a full length of 229km.

### 2. Relevant facilities

Among the 3 components of the Project, only the LNG receiving station and the wharf will be financed by AIIB. Although the pipeline is not financed by AIIB, it complies with the definition of associated facilities” in AIIB’s ESP. AIIB requires that associated facilities should meet the ESP and ESS requirements, and an RAP should be prepared if involuntary resettlement is involved.

### 3. Impacts of the Project

The Project involves 91 villages and two agencies (Nangang Industrial Zone and Beidagang Wetland Conserve) in 23 townships / sub-districts in 8 districts / counties in 3 provinces / municipalities. There are 7 stations and 10 valve houses under the Project, which involve permanent LA; pipeline construction will involve temporary land occupation. 10,229.81 mu of land will be acquired or occupied in total, in which 154.88 mu will be acquired permanently, accounting for 1.51%; and 10,074.93 mu occupied temporarily, accounting for 98.49%. 16 villages in 14 townships will be affected by permanent LA, and 84 villages and two entities in 23 townships by temporary and occupation. 8,805 households with 27,360 persons will be affected by the Project, in which 54 households with 203 persons will be affected by permanent LA, accounting for 0.74%; and 8,751 households with 27,157 persons by temporary land occupation, accounting for 99.26%. Affected ground attachments mainly include non-residential properties, greenhouses, seedlings, fruit trees, tombs and telegraph poles.

### 4. Affected minority population and vulnerable groups

Since the sites of the distribution stations, relay stations and valve houses have been largely fixed, the population affected by permanent LA is largely fixed. According to the preliminary survey, the population affected by permanent LA contains no minority population, and no population below the poverty line and those with no legal title to land. Since the Project is still at the feasibility study stage, and its route may vary later, the population affected by temporary land occupation cannot be finalized. There are some minority residents in some villages in the project area, but they are mostly scattered, the minority communities have been mainstreamed with the general population, and their lifestyle is the same as that of local Han people. The LA compensation policy for minority population is the same as that for Han people, but the

compensation rate for relocated minority tombs is higher.

## **5. Policy framework and entitlements**

This RAP has been prepared in accordance with the applicable regulations and policies of the PRC, Tianjin Municipality, Hebei Province and Beijing Municipality, and AIB's Environmental and Social Framework (February 2006). According to these policies, the resettlement principles of the Project are as follows: 1) The livelihoods of all APs should be improved or at least restored; 2) Capacity and financial assistance should be provided to the APs; 3) The APs should be consulted meaningfully, and made aware of their rights and resettlement options, so that they can participate in resettlement planning, implementation and M&E; 4) No land should be acquired before the APs receive full compensation; 5) The IA or an independent third party will conduct internal supervision and external monitoring on RAP implementation; 6) Attention should be paid to needs of vulnerable groups, especially those under the poverty line, land losers, old people, women, children, indigenous peoples, and those without legal title to land; and 7) The resettlement budget should cover all aspects to be compensated for.

## **6. Compensation rates**

In the Project, the Daquzhuang distribution station, Jinghai relay station, Yongqing relay station, Anci distribution station, final station, and the 2#, 3#, 4#, 5#, 6#, 7#, 8#, 9# and 10# valve houses involve permanent LA. These stations and valve houses are located in Jinghai, Xiqing and Wuqing Districts, Tianjin Municipality, and Yongqing County, Anci District and Guangyang District, Langfang City, Hebei Province, and the final station in Daxing District, Beijing Municipality. The LA compensation rates in Tianjin and Hebei are location-based composite prices for acquired land, including land compensation and a resettlement subsidy. Permanent LA in Tianjin and Hebei involves 15 villages, and the compensation rates are within the range of 28,000-115,000 yuan/mu; the LA compensation rates in Beijing are minimum protective rates, which are minimum rates in the affected townships, and adjusted by the municipal land and resources bureau dynamically. The current compensation rate of Dianzi Village, Lixian Town where the final station is located is 300,000 yuan/mu.

There is no compensation rate for temporary land occupation in the project area. The minimum compensation rate for temporary land occupation in Tianjin and Hebei has been fixed at about 2,000 yuan/mu (excluding crop compensation), and that in Daxing District, Beijing about 4,000 yuan/mu (excluding crop compensation).

According to the Regulations on the Protection of Oil and Gas Pipelines, no deep-rooted plant should be grown within 5m on both sides of the pipeline. Due to this restriction, for oil and gas pipeline projects in the project area, land occupied temporarily within 5m on both sides will be compensated for permanently. Such compensation rate in Tianjin and Hebei is 24,000 yuan/mu, and that in Daxing District, Beijing 60,000 yuan/mu.

Ground attachments mainly include non-residential properties, seedlings, fruit trees, greenhouses, tombs and telegraph poles. Since there are no uniform compensation rates for houses and ground attachments in Hebei, the compensation rates for ground attachments under

the Project will be based on the Compensation Rates for Ground Attachments and Crops on Acquired Land of Tianjin Municipality, and will be finally subject to compensation agreements with affected villages and households.

## **7. Resettlement measures**

Resettlement mainly involves compensation, the availability of production conditions, and income restoration to provide sustainable livelihood support.

Among the Tianjin, Hebei and Beijing areas, there is no population affected by LA in the Beijing area, and Tianjin and Hebei differ in LA compensation and LEF resettlement policies.

In Tianjin, the population affected by LA will be resettled as follows: 1) Cash compensation: For households affected partly by LA, 20% of the land compensation will belong to the collective economic organization and the remaining 80% to each AH; 2) Social security: LEFs eligible under the Interim Measures for Social Security for Land-expropriated Farmers of Tianjin Municipality may also be subject to social security. In 2018, the annual contribution to basic endowment insurance for urban and rural residents was 8,030 yuan; an LEF may pay premiums for 15 years at a time, namely 120,450 yuan to get insured. This sum will be paid by the client out of location-based composite prices for acquired land.

In Hebei, the population affected by LA will be resettled as follows: 1) Cash compensation: For households affected partly by LA, 20% of the land compensation will belong to the collective economic organization and the remaining 80% to each AH; 2) Social security: LEFs with per capita farmland insufficient to support basic livelihoods will be insured, and their premiums will be otherwise paid by the client at 25% of the location-based composite price for acquired land.

For the population affected by temporary land occupation, there is no policy on resettlement. Uniform resettlement measures have been fixed through consultation, namely compensation for land occupation and ground attachments, and reclamation after completion.

## **8. Resettlement agencies**

Except the PMO that is responsible comprehensively for local resettlement, the agencies responsible for compensation and resettlement include natural resources and planning, and labor and social security bureaus, township governments, and village committees. Municipal and county approval bureaus are also involved in Hebei

## **9. Public participation**

The owner attaches great importance to public participation, and conducted extensive participation and consultation during the feasibility study and RAP preparation.

During the feasibility study, Global Choice Project Consulting, Inc. – the social assessment agency of the Project – and the School of Public Policy and Management, Tsinghua University were appointed by the owner to conduct extensive information disclosure, consultation and public participation in the project area with the assistance of the PMO from October 2018 to July 2019.

In August 2019, the task force of the Shanxi Academy of Social Sciences conducted extensive

consultation with the local natural resources and planning, and labor and social security bureaus, township governments, and village committees on compensation measures and rates, resettlement measures, attitudes, opinions, suggestions, etc.

During RAP implementation, further public participation and consultation will be encouraged.

#### **10. Grievance redress**

In order to accept and respond to doubts, appeals and grievances from stakeholders timely and effectively, and protect the APs' lawful rights and interests, an open grievance redress mechanism has been established, including village committees, township governments, county offices for letters and visits, courts, etc. The PMO has also established a grievance redress team and disclosed its contact information near construction sites.

#### **11. Budget**

The estimated resettlement budget of the Project is 286.6553 million yuan, including compensation for LA, temporary land occupation and attachments, and social security costs for LEFs. Such costs will be included in the general budget of the Project, and borne by the contractor. This budget will be updated after the DMS results are verified and the insured LEFs are fixed.

#### **12. Schedule**

The compensation and resettlement work of the Project will begin in September 2019, and end in February 2022. The basic principles of scheduling are as follows: The starting time of compensation for temporary land occupation and LA should be based on the progress of construction and land approval progress, and completed within one month before land use; sufficient time should be allowed for LA compensation before the commencement of construction; production and income restoration should be completed before the Project is put into operation.

#### **13. M&E**

This RAP will be subject to internal supervision and external M&E. The IA will be responsible for internal supervision, and prepare quarterly reports for submission to AIIB, with focus on if compensation and resettlement complies with the RAP and the applicable policies. The PMO will appoint an independent agency to conduct M&E to see if the resettlement objectives are met. Such agency will prepare M&E reports and submit them to AIIB regularly until the completion of resettlement.

## 1. Introduction and Project Overview

The Project consists of a LNG receiving station, a wharf and a pipeline, in which only the LNG receiving station and the wharf will be financed by AIIB. Although the pipeline is not financed by AIIB, it complies with the definition of “associated facilities” in AIIB’s ESP, and is a relevant facility controlled by the client. For relevant facilities, AIIB also requires that the client identify and evaluate its potential environmental and social risks and impacts.

As required by AIIB, the client – Beijing Gas – has prepared this SA and RAP

### 1.1 Introduction

AIIB screens and classifies every project based on its environmental and social risks and impacts. The AIIB experts classify the Project as Category A based on a field investigation. AIIB requires that the client of each Category A project to conduct an environmental and social impact assessment (ESIA). Since the Project will also result in involuntary resettlement, AIIB requires the client to prepare an RAP according to ESS 2, and submit it to AIIB as a separate document.

This RAP has been prepared in accordance with the applicable laws, regulations and policies of the state, Tianjin Municipality, Hebei Province and Beijing Municipality, and AIIB’s relevant policies in order to mitigate the impacts identified in the social impact assessment, and develop an income restoration and resettlement action plan for the APs to minimize their impacts, compensate for their losses, enable them to benefit from the Project, and improve or at least their living standard. This RAP complies with the guidelines outlined in ESS 2: Involuntary Resettlement of AIIB’s Environmental and Social Framework.

This RAP is based on the survey results of the social impact assessment, and establishes a baseline situation of population, education, household properties, employment and income sources of the affected villages and households through an extensive socioeconomic survey, consultation on policies and regulations, a sampling questionnaire survey on the affected population, and face-to-face consultation with the APs.

The basis of preparation of this RAP is as follows: 1) AIIB’s Environmental and Social Framework (February 2016); 2) state laws and regulations, including the Land Administration Law of the PRC, Decision of the State Council on Deepening the Reform and Rigidly Enforcing Land Administration, etc.; and 3) local regulations and policies, including the Land Administration Regulations of Tianjin Municipality, Notice of the Tianjin Municipal Government on Adjusting Location-based Composite Prices for Acquired Land of Tianjin Municipality, Land Administration Regulations of Hebei Province, Notice of the Hebei Provincial Government on the Application of Location-based Composite Prices for Acquired Land, Measures for Compensation and Resettlement for Land Acquired for Construction Purposes of Beijing Municipality, etc. These regulations and policies provide basic support for restoration the APs’ income and mitigating the Project’s negative impacts.

Whether for AIIB or the Chinese government, this RAP is prepared to ensure that those

inevitably losing land and properties permanently or temporarily due to the Project receive adequate compensation and assistance, so they lead lives equivalent to or better than the no-project scenario.

In order to lead project preparation and implementation, Beijing Gas established the project headquarters in October 2018, consisting of the General Office, Supervision and Audit Dept., Planning and Contract Dept., Outsourcing Dept., Production Preparation Dept., and Engineering Dept., where the Production Preparation Dept. is responsible for organizing relevant staff and agencies to prepare this RAP.

This RAP is based on the following information: 1) feasibility study report; 2) social stability risk assessment report; 3) the socioeconomic survey, DMS and questionnaire survey conducted by the task force in mid and late August 2019; and 4) opinions and suggestions of government agencies concerned and APs.

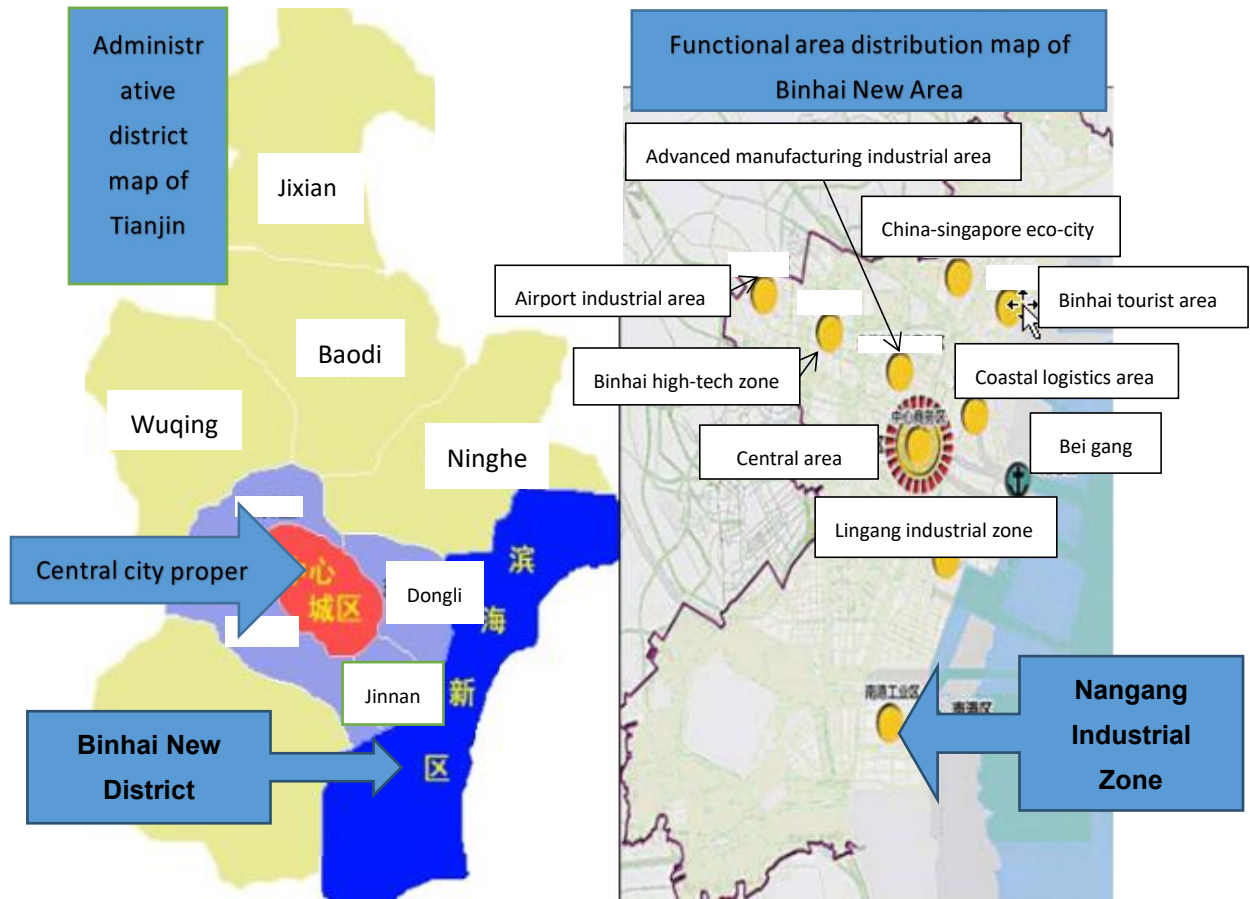
The construction and impact data in this RAP is roughly definite. However, the contractor, county / district natural resources and planning bureaus, township governments, village committees and AHs will conduct a DMS jointly before permanent LA and temporary land occupation, and this RAP will be updated based on the DMS results.

The RAP approved by AIIB will be disclosed on AIIB's website, and the Chinese version on the client's website.

## **1.2 Project Overview**

The Project is located in Nangang Industrial Zone, Tianjin Economic-Technological Development Area, Binhai New District, Tianjin Municipality. Nangang Industrial Zone is located at the estuary of the Duliujian River in southeastern Tianjin, being an important part of Binhai New District. Nangang Industrial Zone is 165km away from Beijing, 45km away from downtown Tianjin, 40km away from Binhai International Airport and 20km away from the Tianjin Port. See Figure 1-1.





**Figure 1-1 Administrative Map of Tianjin and Functional Zoning Map of Binhai New District**

The Project consists of a LNG receiving station, a wharf and a pipeline, where the LNG receiving station is located east of the east harbor basin of Nangang Industrial Zone, the wharf is located at the north end of the east shoreline of the east harbor basin of Nangang Industrial Zone, and the pipeline runs from the first station in the LNG receiving station, through Tianjin, Hebei and Beijing, and ends at the final station in Daxing District, Beijing, with a full length of 229km. See Figure 1-2.



Figure 1-2 Location Map of LNG Receiving Station and Wharf

### 1.3 Relevant Facilities

Among the 3 components of the Project, only the LNG receiving station and the wharf will be financed by AIIB. Although the pipeline is not financed by AIIB, it complies with the definition of “associated facilities” in AIIB’s ESP, and is an associated facility controlled by the client (Beijing Gas). For associated facilities, AIIB also requires that the client identify and evaluate its potential environmental and social risks and impacts.

### 1.4 Background

LNG (liquefied natural gas) is a globally recognized high-quality and clean energy source, used mainly for power generation, and an urban and industrial fuel, and has developed rapidly in recent years. The volume of LNG is about 1/620 of its gaseous form, so LNG is convenient for long-distance transport, storage and utilization. LNG has become the main form of natural gas transported across the ocean today.

With the development of the economy, China’s LNG demand gap is increasing, and more and more LNG is imported annually. In particular, for the Bohai Sea Rim that is short of energy, convenient, safe, clean and efficient LNG is a preferred choice. Whether as a civil fuel or automobile fuel, LNG has an excellent economic benefit and market prospect. With the growth of China’s energy demand, importing LNG will play an important role in optimizing China’s energy mix, ensuring energy security, protecting the ecological environment, and realizing sustainable economic and social development.

China’s existing gas storage facilities have limited peaking capacity due to geological restrictions. At the end of 2017, there were 11 storage depots in the Beijing, Tianjin and Hebei

region, with a peak gas supply of  $6,291 \times 10^4 \text{Nm}^3/\text{d}$ , which could not meet the local peaking demand.

Since 2017, due to coal-to-gas conversion, and economic and environmental factors, the natural gas demand gap of the Beijing, Tianjin and Hebei region has been increasing. It is expected that the natural gas demand of this region will be  $575 \times 10^8 \text{Nm}^3$  in 2020,  $735 \times 10^8 \text{Nm}^3$  in 2025 and  $870 \times 10^8 \text{Nm}^3$  in 2030, while the supplies will be  $461 \times 10^8 \text{Nm}^3$ ,  $629 \times 10^8 \text{Nm}^3$  and  $764 \times 10^8 \text{Nm}^3$  respectively, with annual gaps of about  $110 \times 10^8 \text{Nm}^3$ . In addition, the peaking capacity of the existing gas storage facilities is limited. There are 3 LNG receiving stations, which are the CNOOC Tianjin floating LNG receiving station, and the Sinopec Tianjin LNG and Tangshan LNG receiving stations. It is expected that the total supply capacity of these stations will be  $3.4 \times 10^8 \text{Nm}^3/\text{d}$  in 2022, while the demand of this region will be  $3.7 \times 10^8 \text{Nm}^3/\text{d}$ . In this context, Beijing Gas plans to construct the Project in Nangang Industrial Zone.

The Project will have the following functions:

- 1) Supplying urgent security gas to Beijing;
- 2) Supplying LNG to the Beijing, Tianjin and Hebei region to make up the demand gap;
- 3) Meeting the seasonal peaking demand of the Beijing, Tianjin and Hebei region;
- 4) Connecting the Jinghai relay station to the CNOOC west Mongolia coal gas pipeline, and the Yongqing relay station to the China-Russia east natural gas pipeline; and
- 5) Supplying car-borne LNG to the Beijing, Tianjin and Hebei region to meet the LNG demand of remote areas not covered by the pipeline.

The gross investment in the Project is 20.34359 billion yuan, in which the investment in the receiving station and wharf is 14.56485 billion yuan, accounting for 71.59%, and that in the pipeline 5.77874 billion yuan, accounting for 28.41%. 30% of the investment is from the government, 20% from Beijing Gas and 50% from the AIIB loan.

For the receiving station and wharf, an AIIB loan of \$500 million will be applied for.

The implementing agency of the Project is Beijing Gas, which is headquartered in Beijing and was founded in September 1999, being a wholly state-owned company and China's largest urban gas supplier. In 2017, Beijing Gas's natural gas supply was  $154 \times 10^8 \text{Nm}^3$  and total assets 61.2 billion yuan.

## 1.5 Associated Facilities—Project Overview

The pipeline runs from the first station in the LNG receiving station, and ends at the final station in Daxing District, Beijing, with a full length of 229km. The pipeline will be fully buried from southeast to northwest, running through Binhai New, Jinghai, Xiqing and Wuqing Districts, Tianjin Municipality; Anci District, Yongqing County and Guangyang District in Langfang City, Hebei Province; and Daxing District, Beijing Municipality. There are 7 stations along the pipeline, which are the first station, Nangang distribution station, Daquzhuang distribution station, Jinghai relay station,

Yongqing relay station, Anci distribution station and final station, as well as 10 cut-off valve houses. The pipeline has a design pressure of 10MPa, a design throughput of 60 million m<sup>3</sup>/d, and a diameter of 1,219mm (first station to Yongqing relay station) / 1,016mm (from Yongqing relay station to final station). An interface with the Sinopec LNG pipeline will be reserved at the first station, the Jinghai relay station will be connected to the CNOOC west Mongolia coal gas pipeline, and the Yongqing relay station will be connected to the China-Russia east natural gas pipeline. See Figure 1-3.

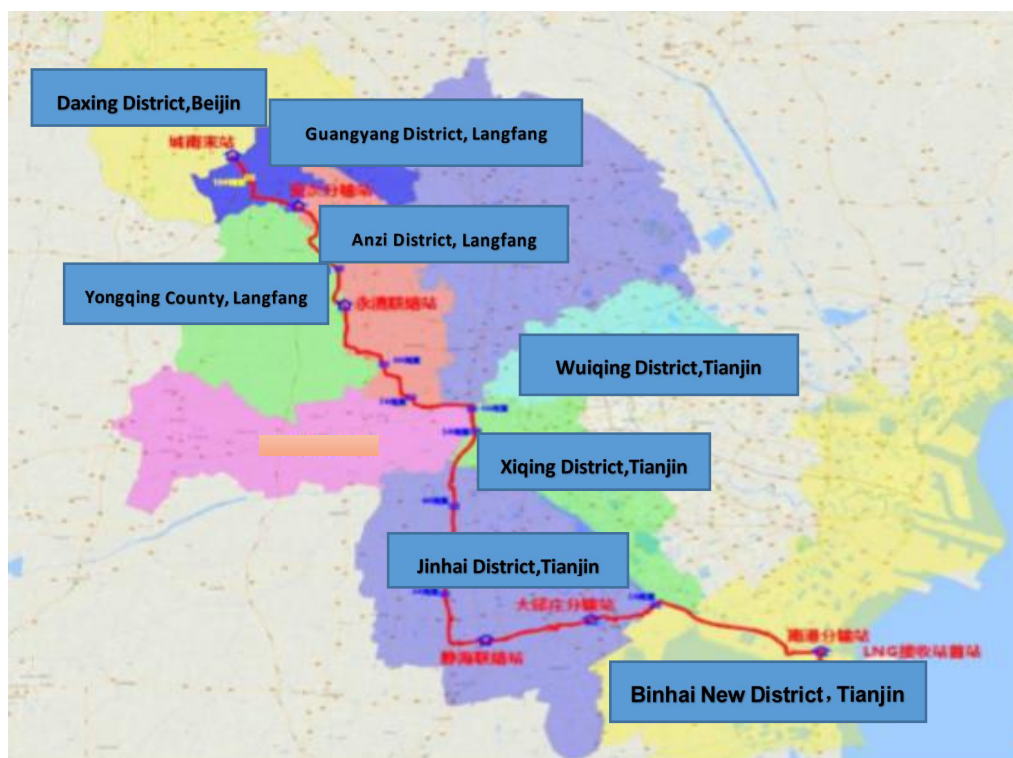


Figure 1-3 Route Map of the Project (As shown in the red line)

## 1.6 Project Schedule

According to the meeting minutes of the National Energy Administration, the Project will break ground in October 2019 and be completed in May 2022. See Table 1-1.

Table 1-1 Project Schedule

No.	Time	Item
1	May 2018 – Jan. 2019	Preparation and approval of the feasibility study report
2	Apr. – Jul. 2019	Project approval
3	Apr. – Jun. 2019	Preparation and approval of the preliminary design
4	Jul. 2019	Beginning of bidding

5	Aug. 2019	EPC and supervision bidding, and contracting
6	Sep. 2019	Beginning of detailed design
7	Oct. 2019	Commencement of construction
8	May 2022	Completion

## 1.7 Measures to Alleviate Negative Impacts

During the feasibility study, the adverse impacts of the Project were minimized through proper site and route selection. During construction, land occupation will be minimized through strict management.

### 1.7.1 Principles for Site and Route Selection

1) The distribution stations, relay stations and valve houses should be located on urban and rural construction land, or unused land where possible, and the occupation of farmland minimized.

2) The pipeline should run through plains, and along existing pipelines, highways, railways and high-voltage corridors to avoid densely populated areas, basic farmland, ponds and forests where possible. When it runs through forests, it should run through sparse and low forests, and young and commercial forests where possible.

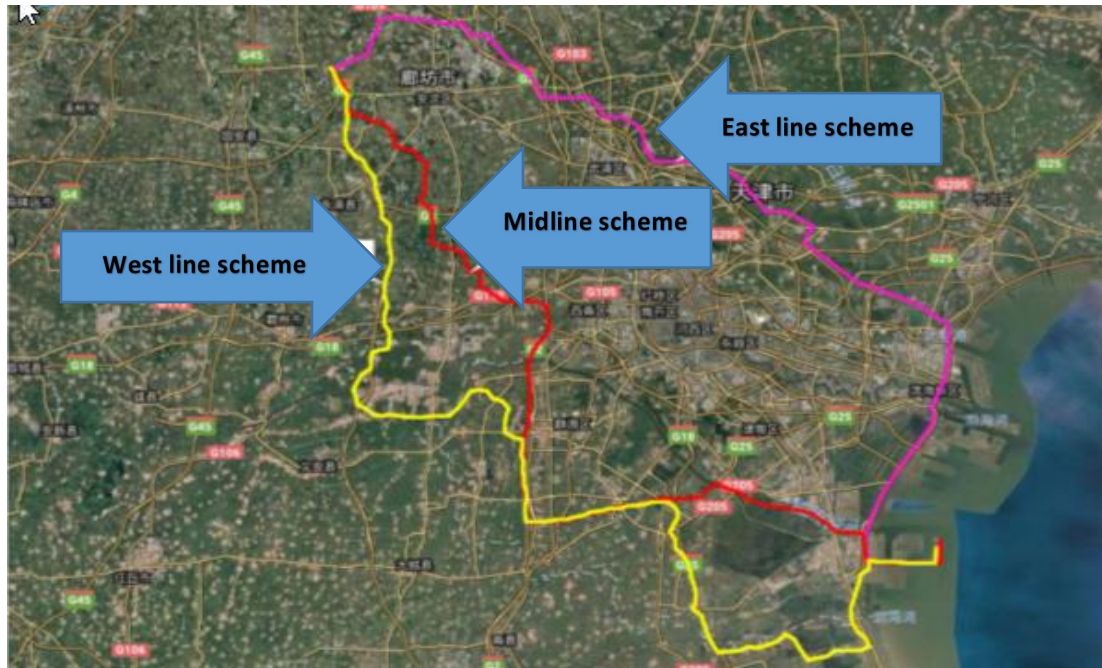
### 1.7.2 Option Comparison

During the pre-feasibility study, there were 3 route options for the pipeline from Tianjin to Beijing, namely the west, central and east route options, as shown in Figure 1-4 and Table 1-3. The 3 options are largely consistent in natural conditions, and urban planning and mining setting. The east route option is shorter, but runs through a densely populated urban planning area; the west route option runs through many ecological red zones, including rivers, reservoirs and wetlands; the central route option involves less permanent LA, temporary land occupation and HD than the other two options, especially HD. Through repeated comparison during the feasibility study, the central route option was selected, and also approved by the local governments. See Table 1-2.

The route will be further optimized during preliminary design to avoid farmland, orchards, fishponds, etc.

### 1.7.3 Construction Management

At the construction stage, existing roads will be utilized where possible, construction site ranges and widths controlled strictly, construction vehicles and staff not allowed to cross construction sites, and earth and rock produced during construction not piled up out of the construction area. In addition, since the Project is linear in shape, it will be constructed in segments and in different seasons to shorten the construction period.


**Figure 1-4 Comparison of 3 Proposed Routes**
**Table 1-2 Construction Quantities of 3 Options**

No.	Item		East route option	Central route option	West route option	
1	Pipeline length	Full length (km)	227	229	281	
		By landform	Plain (km)	196	180.8	210
			Water network (km)	31	48.2	71
2	Crossing and spanning	Railway (m/positions)	780/9	780/9	780/9	
		High-grade highway (m/positions)	2980/34	2080/26	3620/41	
		Large water crossing (m/positions)	12500/11	1550/2	1800/2	
		Medium water crossing (m/positions)	3400/5	2050/3	1100/2	
3	Length of difficult segments (km)		66.8	47.7	70.3	
4	Length through state & province-level nature reserve (km)		18	30	37	
5	Road construction	Construction roads (km)	Newly built	70.2	73.52	87.2
			Rebuilt / expanded	24.9	25.0	30.9
6	Earthwork and rockwork	Earth segment (km)		159	229	197
		Earthwork (10 <sup>4</sup> m <sup>3</sup> )		450	439.9	1467
7	Water and soil	Masonry protection (10 <sup>4</sup> m <sup>3</sup> )		7.5	6.8	10
8	Land acquisition / occupation	Permanent LA (m <sup>2</sup> )		5972	5927	7138
		Temporary land occupation (10 <sup>4</sup> m <sup>2</sup> )		672	618	832
9	Compensation	Relocation compensation (10 <sup>4</sup> m <sup>2</sup> )		18.1	4.2	22.83
		Crop compensation (10 <sup>4</sup> m <sup>2</sup> )		68	77	60
		Fruit tree compensation (10 <sup>4</sup> m <sup>2</sup> )		18	16	15

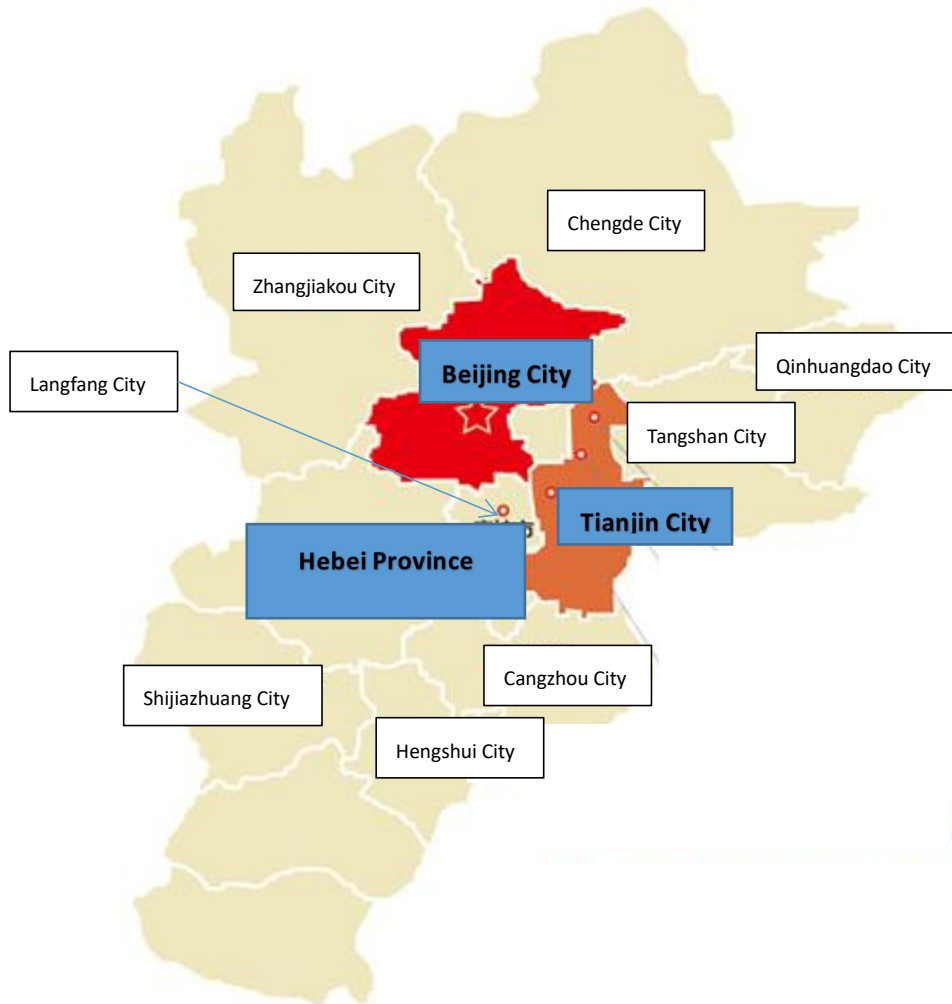
## **1.8 Cut-off Date**

In the Project, 6 distribution and relay stations, and 9 valve houses involve permanent LA, and the acquired land is mostly rural collective land. The land user should apply for LA with local natural resources and planning authorities. According to law, after the land user files a land use application with the district / county natural resources and planning bureau, the basic information of the affected entity and the land to be acquired will be investigated, a compensation rate fixed, and a resettlement program developed together with the local township government and the affected entity. The district / county natural resources and planning bureau will notify the purpose and location of the land to be acquired, compensation rate and resettlement program to the affected village committee and villagers in writing, and confirm the investigation results (ownership, types and quantities of land, crops and ground attachments) with the affected rural collective organization, villagers and proprietors. The date of issue of such notice is the cut-off date, and any crop cultivated after this date will not be included.

Currently, LA for the stations and valve houses of the Project has passed the preliminary review of the Tianjin Municipal Natural Resources and Planning Bureau, Hebei Provincial Natural Resources Department, and Beijing Municipal Natural Resources and Planning Commission, and the PMO is about to apply for LA. It is expected that the LA pre-announcement will be released by the local natural resources and planning authorities in May 2020, which is the cut-off date.

## 2. Impacts of the Project

The Project involves 7 districts / counties in Beijing, Tianjin and Hebei, and the main types of impacts include permanent LA, temporary land occupation, crops and ground attachments.



**Figure 2- 1 Map of Beijing, Tianjin and Hebei**

### 2.1 Project Area

The pipeline begins at the first station in Nangang Industrial Zone, Binhai New District, Tianjin Municipality and ends at the final station in Dianzi Village, Lixian Town, Daxing District, Beijing, with a full length of 229km, running through Binhai New, Jinghai, Xiqing and Wuqing Districts, Tianjin Municipality; Anci District, Yongqing County and Guangyang District in Langfang City, Hebei Province; and Daxing District, Beijing Municipality. The Project involves 91 villages and two entities in 23 townships / sub-districts in 8 districts / counties in 3 provinces / municipalities. See Table 2-1.



Table 2-1 Project Area

Province / municipality	District / county	Township	Village / entity	
			Name	Number
Tianjin	Binhai New District	Hangzhoudao Sub-district	Nangang Industrial Zone	1
		Haibin Sub-district	Beidagang Wetland Conserve	1
		Zhongtang Town	Nantai, Beitai, Xinfangzi, Liutangzhuang, Changliuzhuang	5
	Jinghai District	Daqiuizhuang Town	Dongshang Dock, Guankeng, Manjingzi, Taiping, Datun, Hulianzhuang	6
		Tuanbo Town	Xuejiafangzi	1
		Xizhaizhuang Town	Hexin, Shunmintun, Yangxiaozhuang, Anjiazhuang	4
		Shuangtang Town	Xishuangtang, Pulou, Zhoujiayuan, Dongmoyuan	4
		Duliu Town	Liujiaying, Goujiaying, Wangjiaying, Yihejie, Jiushibao, Youhaojie, Fengyi	7
		Chenguantun Town	Tancun, Xichangtun, Wangguantun, Zoujiazui, Jizhuangzi, Xiaoji, Huxinzhuang	7
		Liangtou Town	Xinzhuangzi, Guzhuangzi, Dongjiakou, Qiandengzhuang, Donghetou	5
		Jinghai Town	Yangliyuan, Dahetan, Xiaokouzimen, Yidunkou	4
		Caigongzhuang Town	Caigongzhuang	1
	Wuqing District	Wangqingtuo Town	Yijie, Wang'erdian, Sihezhuang, Daogouzi	4
	Xiqing District	Yangliuqing Town	Xifangzi	1
		Xinkou Town	Xiaxinkou, Dangcheng, Shuigaozhuang, Diliubu	4
<b>Subtotal</b>	<b>4</b>	<b>15</b>		<b>55</b>
Langfang, Hebei	Anci District	Donggugang Town	Donggugangsi, Wujie, Yushuyuan, Mochagang, Guozhuang	5
		Geyucheng Town	Nandi, Xinzhuangzi, Xiaguan, Jiujiapu, Xiaomachang	5
		Diaohetou Xiang	Zhongmazhuang, Halagang, Huzhuangzi, Xiaohuizhuang, Xizhangzhuang	5
		Yangshuiwu Xiang	Xiaocixiang, Chanfang, Xichu, Ciping, Mengcun, Xitai pingzhuang, Chaijiawu,	8

			Dabeishi	
	Yongqing County	Bieguzhuang Town	Nanrenying, Jiaozhuang, Liuheng, Guandao, Shuangxiaoying, Nanliuzhuang, Beiliuzhuang	7
		Hancun Town	Hengting	1
	Guangyang District	Jiuzhou Town	Fashang, Wangma, Zhaogezhuang, Majiawu, Nanhan, Huotouying	6
<b>Subtotal</b>	<b>3</b>	<b>7</b>		<b>37</b>
Beijing	Daxing District	Lixian Town	Dianzi	1
<b>Subtotal</b>	<b>1</b>	<b>1</b>		<b>1</b>
<b>Total</b>	<b>8</b>	<b>23</b>		<b>93</b>

## 2.2 Types of Impacts

The pipeline runs through Binhai New, Jinghai, Xiqing and Wuqing Districts, Tianjin Municipality; Anci District, Yongqing County and Guangyang District in Langfang City, Hebei Province; and Daxing District, Beijing Municipality, with a full length of 229km. There are 7 stations (first station, Nangang distribution station, Daqizhuang distribution station, Jinghai relay station, Yongqing relay station, Anci distribution station and final station) and 10 valve houses under the Project, which involve permanent LA; pipeline construction will involve temporary land occupation. There are non-residential properties, crops, seedlings, fruit trees, greenhouses, tombs and telegraph poles on the permanently acquired and temporarily occupied land. Some households will lose farmland permanently due to permanent LA, and the agricultural production of some households will be affected temporarily due to temporary land occupation.

## 2.3 Land Permanent Acquisition and Temporary Occupation

10,229.81 mu of land will be acquired permanently or occupied temporarily in total, in which 154.88 mu will be acquired permanently, accounting for 1.51%; and 10,074.93 mu occupied temporarily, accounting for 98.49%.

The land permanently acquired or temporarily occupied for the Project includes 39.96 mu of state-owned construction land, accounting for 0.39; and 10,189.85 mu of collective land, accounting for 99.61%.

The permanently acquired or temporarily occupied land includes 3,937.95 mu of cultivated land, accounting for 38.49%; 2,222.24 mu of garden land, accounting for 21.72%; 2,106.9 mu of unused land, accounting for 20.6%; 1,531.63 mu of woodland, accounting for 14.97%; 39.99 mu of construction land, accounting for 0.39%; 7.85 mu of other farmland, accounting for 0.08%; and 383.7 mu of pond, accounting for 3.75%. See Table 2-2.

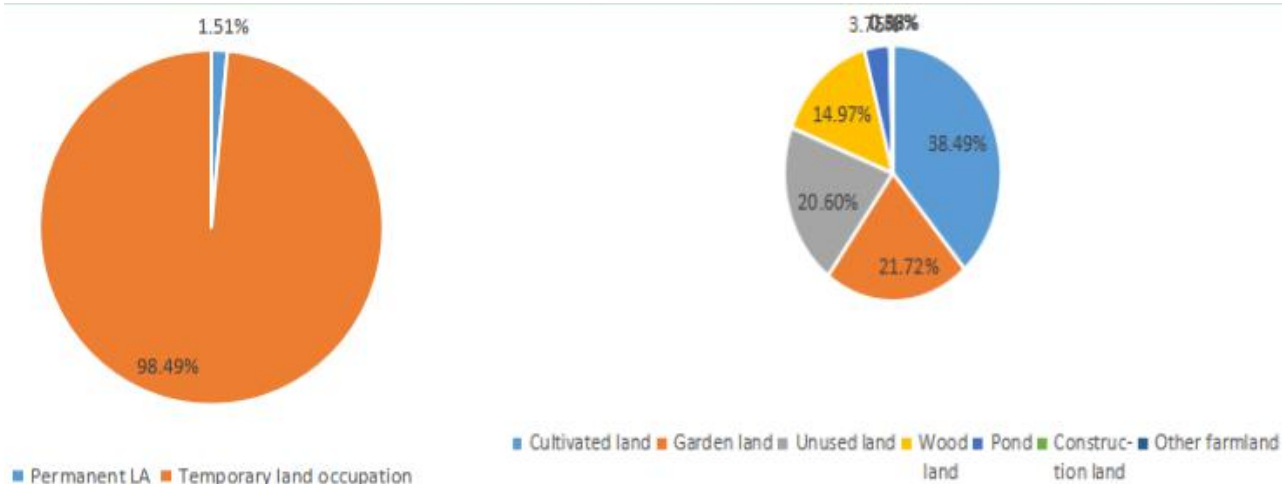


Figure 2-2 Percentages of Permanent LA and Temporary Land Occupation, and Land Types

Table 2-2 Permanently Acquired and Temporarily Occupied Land

Type	Total	Land area by nature (mu)		Land area by type (mu)						
		State-owned	Collective	Cultivated land	Garden land	Wood land	Other farmland	Construction land	Pond	Unused land
Permanent LA	154.88	39.96	114.92	51.27	8.39	47.38	7.85	39.99		
Temporary land occupation	10074.93		10074.93	3886.68	2213.85	1484.25			383.7	2106.9
Total	10229.81	39.96	10189.85	3937.95	2222.24	1531.63	7.85	39.99	383.7	2106.9

### 2.3.1 Permanent LA

7 stations and 10 valve houses will be constructed under the Project, in which the first station and the 1# valve house are located on reclaimed land in the Nangang Wharf, involving no LA, while the other 6 distribution and relay stations, and 9 valve houses involve the permanent acquisition of 154.88 mu of land.

16 villages in 15 townships will be affected by permanent LA, including 8 villages in 7 townships in Tianjin, 7 villages in 7 townships in Hebei and one village in one township in Beijing.

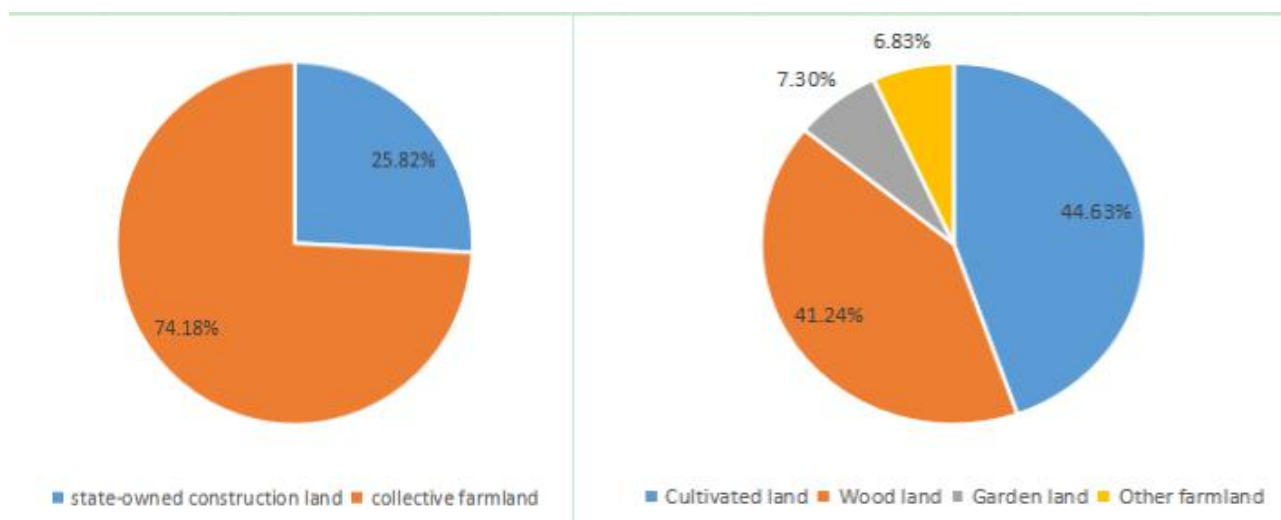
The 154.88 mu of acquired land includes 39.99 mu of state-owned construction land, accounting for 25.82%; and 114.89 mu of collective farmland, accounting for 74.18%.

The 39.99 mu of state-owned construction land includes 37.43 mu of urban construction land,

accounting for 93.60%; and 2.56 mu of other construction land (unused land), accounting for 6.40%.

The 114.89 mu of collective farmland includes 51.27 mu of cultivated land, accounting for 44.63%; 47.38 mu of woodland, accounting for 41.24%; 8.39 mu of garden land, accounting for 7.30%; and 7.85 mu of other farmland, accounting for 6.83%.

In the 154.88 mu of acquired land, 84.25 mu is in Tianjin, accounting for 54.4%; 56 mu in Hebei, accounting for 36.16%; and 14.63 mu in Beijing, accounting for 9.44%. See Table 2-3.



**Figure 2-3 Natures of Acquired Land, and Types of Acquired Collective Farmland**

### 2.3.2 Temporary Land Occupation

The pipeline will involve the temporary occupation of 10,074.93 mu of land, including 9,502.53 mu for pipeline construction, accounting for 94.32%; 496.35 mu for temporary roads, accounting for 4.93%; and 76.05 mu for stockyards, accounting for 0.75%.

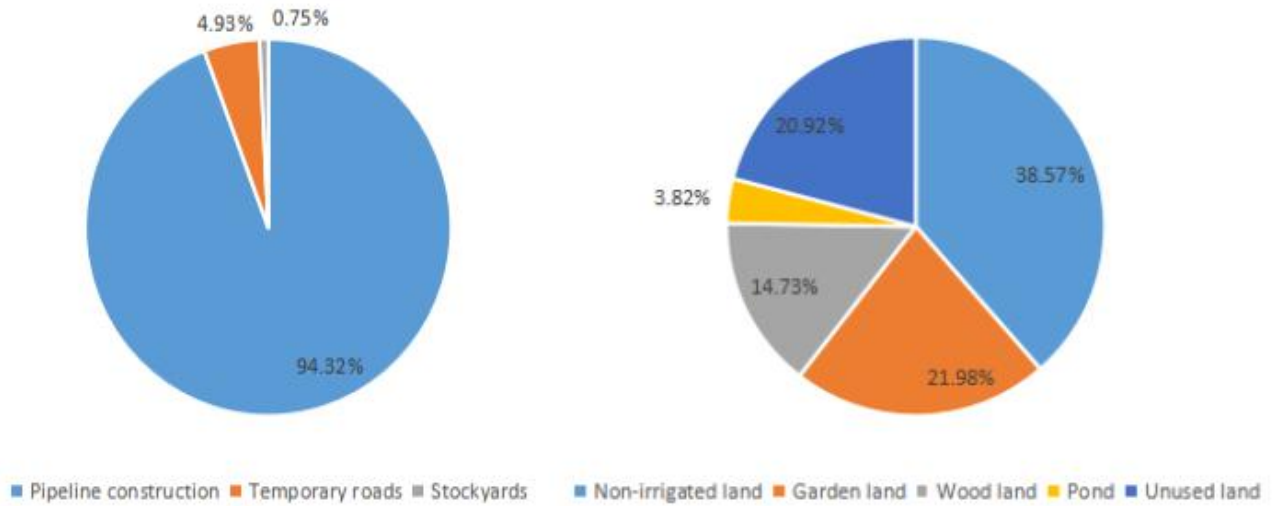
84 villages will be affected by temporary land occupation, including 48 in Tianjin, 36 in Hebei and one in Beijing.

The temporarily occupied land includes 3,886.35 mu of non-irrigated land, accounting for 38.57%; 2,214.15 mu of garden land, accounting for 21.98%; woodland 1483.83.1 mu, accounting for 14.73%; 383.85 mu of pond, accounting for 3.82%; and 2,106.75 mu of unused land, accounting for 20.92%.

In the 10,074.93 mu of temporarily occupied land, 6,870.3 mu is in Tianjin, accounting for 68.19%; 3,203.85 mu in Hebei, accounting for 31.80%; and 0.78 mu in Beijing, accounting for 0.01%. See Table 2-4.

According to the relevant law and regulations, after construction the land used for temporary purpose will be restored to its original use. The quality of land reclamation will be strictly conformed

with the reclamation program approved by the local natural resources and planning authority. In order to restore to original cultivation conditions, the common practice is to put top soil of occupied cultivated land and woodland aside before construction, and use them for land reclamation afterwards.



**Figure 2-4 Purposes of Temporary Land Occupation and Land Types**

Table 2-3 Permanent LA Impacts

Item	Administrative division				Nature	LA area (mu)	Farmland (mu)						Construction land (mu)				
	Province / municipality	Township	Township	Village			Subtotal	Cultivated land		Garden land	Wood land	Other farmland		Subtotal	Urban / rural construction land		Other land
								Irrigated land	Non-irrigated land			Irrigation land	Road land		Urban	Rural	
First station	Tianjin	Binhai New District	Nangang Industrial Zone		/	/											
Nangang distribution station			Nangang Industrial Zone		State-owned	39.96							39.96	37.40		2.56	
Daqiuozhuang distribution station		Jinghai District	Daqiuozhuang Town	Dongshang Dock	Collective	12.74	12.74		9.49			3.25					
				Guankeng	Collective	0.19	0.19				0.19						
Jinghai relay station			Xizhaizhuang Town	Hexin	Collective	20.58	20.58		17.78			1.84	0.96				
1# valve house			Binhai New District	Nangang Industrial Zone		/	/										
2# valve house				Zhongtang Town	Changliuzhuang	Collective	2.53	2.53	1.87			0.64	0.02				
3# valve house			Jinghai District	Chengquantun Town	Tancun	Collective	1.56	1.56	1.29			0.27					
4# valve house				Duliu Town	Liujiaying	Collective	2.53	2.53	2.06			0.40	0.07				
5# valve house			Xiqing District	Xinkou Town	Xiaxinkou	Collective	2.53	2.53			2.53						
6# valve house		Wuqing District	Wangqingtuo Town	Yijie	Collective	1.63	1.63	1.37		0.15		0.11					

<b>Subtotal</b>						<b>84.25</b>	<b>44.29</b>	<b>3.24</b>	<b>30.62</b>	<b>0</b>	<b>2.68</b>	<b>6.59</b>	<b>1.16</b>	<b>39.96</b>	<b>37.40</b>	<b>0</b>	<b>2.56</b>	
Yongqing relay station	Langfang, Hebei	Yongqing County	Bieguzhuang Town	Nanrenying	Collective	<b>10.17</b>	10.14			5.73	4.31		0.10	0.03		0.03		
		Anci District	Diaohetou Xiang	Zhongmazhuang	Collective	<b>17.97</b>	17.97				17.97							
Anci distribution station		Anci District	Yangshuiwu Xiang	Xiaocixiang	Collective	<b>17.41</b>	17.41		17.41									
			7# valve house	Donggugang Town	Donggugangsi	Collective	<b>2.60</b>	2.60				2.60						
8# valve house			Geyucheng Town	Nandi	Collective	<b>2.58</b>	2.58				2.58							
9# valve house			Yongqing County	Bieguzhuang Town	Jiaozhuang	Collective	<b>2.61</b>	2.61				2.61						
10# valve house			Guangyang District	Jiuzhou Town	Fashang	Collective	<b>2.66</b>	2.66			2.66							
<b>Subtotal</b>						<b>56</b>	<b>55.97</b>	<b>0</b>	<b>17.41</b>	<b>8.39</b>	<b>30.07</b>	<b>0</b>	<b>0.10</b>	<b>0.03</b>	<b>0</b>	<b>0.03</b>	<b>0</b>	
Final station	Beijing	Daxing District	Lixian Town	Dianzi	Collective	<b>14.63</b>	14.63				14.63							
<b>Total</b>						<b>154.88</b>	<b>114.89</b>	<b>3.24</b>	<b>48.03</b>	<b>8.39</b>	<b>47.38</b>	<b>6.59</b>	<b>1.26</b>	<b>39.99</b>	<b>37.40</b>	<b>0.03</b>	<b>2.56</b>	

Note: The first station and the 1# valve house are located on reclaimed land in the Nangang Wharf, involving no LA

Table 2-4 Impacts of Temporary Land Occupation

Province / municipality	Township	Township	Village / agency	Occupied land area (mu)	By purpose (mu)			By land type (mu)				
					Pipeline	Stockyards	Tempora	Non-irrigated	Garden	Wood	Pond	Unused

					construction		ry roads	land	land	land		land	
Tianjin	Binhai New District	Haibin Sub-district	Nangang Industrial Zone	954	900.75	6.75	46.5	95.4				858.6	
			Beidagang Wetland Conserve	546	546					218.4	327.6		
		Hangzhoudao Sub-district	Nangang Industrial Zone	401.25	336	5.25	60	40.2					361.2
			Beidagang Wetland Conserve	252	252						25.2	226.8	
		Zhongtang Town	Nantai	84	84							8.4	75.6
			Beitai	126	126							12.6	113.4
			Xinfangzi	159.6	126	3.6	30					15.9	143.7
			Liutangzhuang	129.3	126	3.3		64.65	38.85	25.8			
			Changliuzhuang	126	126			63	37.8	25.2			
	<b>Subtotal</b>			<b>2778.15</b>	<b>2622.75</b>	<b>18.9</b>	<b>136.5</b>	<b>263.25</b>	<b>76.65</b>	<b>51</b>	<b>280.5</b>	<b>2106.9</b>	
	Jinghai District	Daqiuzhuang Town	Manjingzi	42	42			21	12.6	8.4			
			Taiping	42	42			21	12.6	8.4			
			Datun	87.75	84	3.75		43.95	26.4	17.55			
			Guankeng	198	168		30	99	59.4	39.6			
			Hulianzhuang	168	168			84	50.4	33.6			
		Tuanbo Town	Xuejiafangzi	84	84	0	0	42	25.2	16.8	0	0	
		Xizhaizhuang Town	Shunmintun	258.15	210	3.15	45	103.2	25.8	25.8	103.35	0	
Yangxiaozi			84	84	0	0	42	25.2	16.8	0	0		



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		Hexin	126	126	0	0	63	37.8	25.2	0	0
		Anjiazhuang	84	84	0	0	42	25.2	16.8	0	0
	Shuangtang Town	Xishuangtang	99	84	0	15	49.5	29.7	19.8	0	0
		Pulou	42	42	0	0	21	12.6	8.4	0	0
		Zhoujiayuan	42	42	0	0	21	12.6	8.4	0	0
		Dongmoyuan	42	42	0	0	21	12.6	8.4	0	0
	Duliu Town	Goujiaying	42	42	0	0	21	12.6	8.4	0	0
		Wangjiaying	141	126	0	15	70.5	42.3	28.2	0	0
		Yihejie	42	42	0	0	21	12.6	8.4	0	0
		Jiushibao	213.75	210	3.75	0	106.95	64.2	42.75	0	0
		Youhaojie	42	42	0	0	21	12.6	8.4	0	0
		Fengyi	42	42	0	0	21	12.6	8.4	0	0
	Chenguantun Town	Xichangtun	84	84	0	0	42	25.2	16.8	0	0
		Wanguantun	159.6	126	3.6	30	79.8	47.85	31.95	0	0
		Zoujiazui	84	84	0	0	42	25.2	16.8	0	0
		Jizhuangzi	126	126	0	0	63	37.8	25.2	0	0
		Xiaoji	84	84	0	0	42	25.2	16.8	0	0
		Huxinzhuang	135.3	126	0	9.3	67.65	40.65	27	0	0
	Liangtou Town	Xinzhuangzi	42	42	0	0	21	12.6	8.4	0	0
		Guzhuangzi	42	42	0	0	21	12.6	8.4	0	0
		Dongjiakou	87.15	84	3.15	0	43.65	26.1	17.4	0	0

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			Qiandengzhuang	42	42	0	0	21	12.6	8.4	0	0
			Donghetou	126	126	0	0	63	37.8	25.2	0	0
		Jinghai Town	Yangliyuan	99	84	0	15	49.5	29.7	19.8	0	0
			Dahetan	45.15	42	3.15	0	22.65	13.5	9	0	0
			Xiaokouzimen	42	42	0	0	21	12.6	8.4	0	0
			Yidunkou	42	42	0	0	21	12.6	8.4	0	0
		Caigongzhuang Town	Caigongzhuang	85.5	84	1.5	0	42.75	25.65	17.1	0	0
<b>Subtotal</b>				<b>3247.35</b>	<b>3066</b>	<b>22.05</b>	<b>159.3</b>	<b>1598.1</b>	<b>922.65</b>	<b>623.55</b>	<b>103.2</b>	<b>0</b>
Wuqing District	Wangqingtu Town		Wang'erdian	187.5	168		19.5	93.75	56.25	37.5		
			Sihezhuang	42	42			21	12.6	8.4		
			Daogouzi	170.7	168	2.7		85.35	51.15	34.2		
<b>Subtotal</b>				<b>400.2</b>	<b>378</b>	<b>2.7</b>	<b>19.5</b>	<b>200.1</b>	<b>120</b>	<b>80.1</b>		
Xiqing District	Yangliuqing Town		Xifangzi	84	84			42	25.2	16.8		
	Xinkou Town		Dangcheng	42	42			21	12.6	8.4		
			Shuigaozhuang	192.6	168	3	21.6	96.3	57.75	38.55		
			Diliubu	126	126			63	37.8	25.2		
<b>Subtotal</b>				<b>444.6</b>	<b>420</b>	<b>3</b>	<b>21.6</b>	<b>222.3</b>	<b>133.35</b>	<b>88.95</b>		
<b>Total</b>				<b>6870.3</b>	<b>6486.75</b>	<b>46.65</b>	<b>336.9</b>	<b>2283.75</b>	<b>1252.65</b>	<b>843.6</b>	<b>383.7</b>	<b>2106.9</b>
Langfang, Hebei	Anci District	Donggugang Town	Wujie	198	168	0	30	99	59.4	39.6	0	0
			Yushuyuan	87	84	3	0	43.5	26.1	17.4	0	0

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		Mochagang	84	84	0	0	42	25.2	16.8	0	0
		Guozhuang	126	126	0	0	63	37.8	25.2	0	0
	Geyucheng Town	Xinzhuangzi	84	84	0	0	42	25.2	16.8	0	0
		Xiaguan	84	84	0	0	42	25.2	16.8	0	0
		Jiujiapu	84	84	0	0	42	25.2	16.8	0	0
		Xiaomachang	141	126	0	15	70.5	42.3	28.2	0	0
		Nandi	42	42	0	0	21	12.6	8.4	0	0
		Diaohetou Xiang	Halagang	129.9	126	3.9	0	64.95	39	25.95	0
	Huzhuangzi		42	42	0	0	21	12.6	8.4	0	0
	Xiaohuizhuang		141	126	0	15	70.5	42.3	28.2	0	0
	Xizhangzhuang		84	84	0	0	42	25.2	16.8	0	0
	Yangshuiwu Xiang	Chanfang	42	42	0	0	21	12.6	8.4	0	0
		Xichu	42	42	0	0	21	12.6	8.4	0	0
		Ciping	91.5	84	7.5	0	45.75	27.45	18.3	0	0
		Mengcun	84	84	0	0	42	25.2	16.8	0	0
		Xitaipingzhuang	42	42	0	0	21	12.6	8.4	0	0
		Chaijiawu	114	84	0	30	57	34.2	22.8	0	0
		Dabeishi	42	42	0	0	21	12.6	8.4	0	0
		Xiaocixiang	42	42	0	0	21	12.6	8.4	0	0
	<b>Subtotal</b>		<b>1826.4</b>	<b>1722</b>	<b>14.4</b>	<b>90</b>	<b>913.2</b>	<b>547.95</b>	<b>365.25</b>	<b>0</b>	<b>0</b>
Yongqing	Bieguzhuang	Liuheng	84	84	0	0	42	25.2	16.8	0	0

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	County	Town	Nanrenying	100.5	78	7.5	15	50.25	30.15	20.1	0	0
			Guandao	39	39	0	0	19.5	11.7	7.8	0	0
			Shuangxiaoying	39	39	0	0	19.5	11.7	7.8	0	0
			Nanliuzhuang	39	39	0	0	19.5	11.7	7.8	0	0
			Beiliuzhuang	145.65	117	3.45	25.2	72.9	43.65	29.1	0	0
			Jiaozhuang	78	78	0	0	39	23.4	15.6	0	0
	Hancun Town	Hengting	78	78	0	0	39	23.4	15.6	0	0	
<b>Subtotal</b>				<b>603.15</b>	<b>552</b>	<b>10.95</b>	<b>40.2</b>	<b>301.65</b>	<b>180.9</b>	<b>120.6</b>	<b>0</b>	<b>0</b>
Guangyang District	Jiuzhou Town	Wangma	78	78	0	0	39	23.4	15.6	0	0	
		Zhaogezhuang	173.25	156	2.25	15	86.7	52.05	34.65	0	0	
		Majiawu	117	117	0	0	58.5	35.1	23.4	0	0	
		Nanhan	156	156	0	0	78	46.8	31.2	0	0	
		Fashang	133.05	117	1.8	14.25	66.6	39.9	26.55	0	0	
		Huotouying	117	117	0	0	58.5	35.1	23.4	0	0	
<b>Subtotal</b>				<b>774.3</b>	<b>741</b>	<b>4.05</b>	<b>29.25</b>	<b>387.3</b>	<b>232.35</b>	<b>154.8</b>	<b>0</b>	<b>0</b>
<b>Total</b>				<b>3203.85</b>	<b>3015</b>	<b>29.4</b>	<b>159.45</b>	<b>1602.15</b>	<b>961.2</b>	<b>640.65</b>	<b>0</b>	<b>0</b>
Beijing	Daxing District	Lixian Town	Dianzi	0.78	0.78	0	0	0.78			0	0
<b>Total</b>				<b>10074.93</b>	<b>9502.53</b>	<b>76.05</b>	<b>496.35</b>	<b>3886.68</b>	<b>2213.85</b>	<b>1484.25</b>	<b>383.7</b>	<b>2106.9</b>

## 2.4 Affected Households and Population

8,805 households with 27,360 persons will be affected by the Project, in which 54 households with 203 persons will be affected by permanent LA, accounting for 0.74%; and 8,751 households with 27,157 persons by temporary land occupation, accounting for 99.26%.

According to the preliminary survey, the population affected by permanent LA contains no minority population, and no population below the poverty line and those with no legal title to land. Since the Project is still at the feasibility study stage, and its route may vary later, the population affected by temporary land occupation cannot be finalized. There are some minority residents in some villages in the project area, but they are mostly scattered, and have no language of their own, and their lifestyle is the same as that of local Han people. The LA compensation policy for minority population is the same as that for Han people, but the compensation rate for relocated minority tombs is higher.

### 2.4.1 Households and Population Affected by Permanent LA

54 households with 203 persons in 14 villages in 14 townships in 7 districts / counties in two provinces / municipalities will be affected by permanent LA for the Project, including 25 households with 84 persons in Tianjin, 29 households with 54 persons in Hebei and none in Beijing. See Table 2-5.

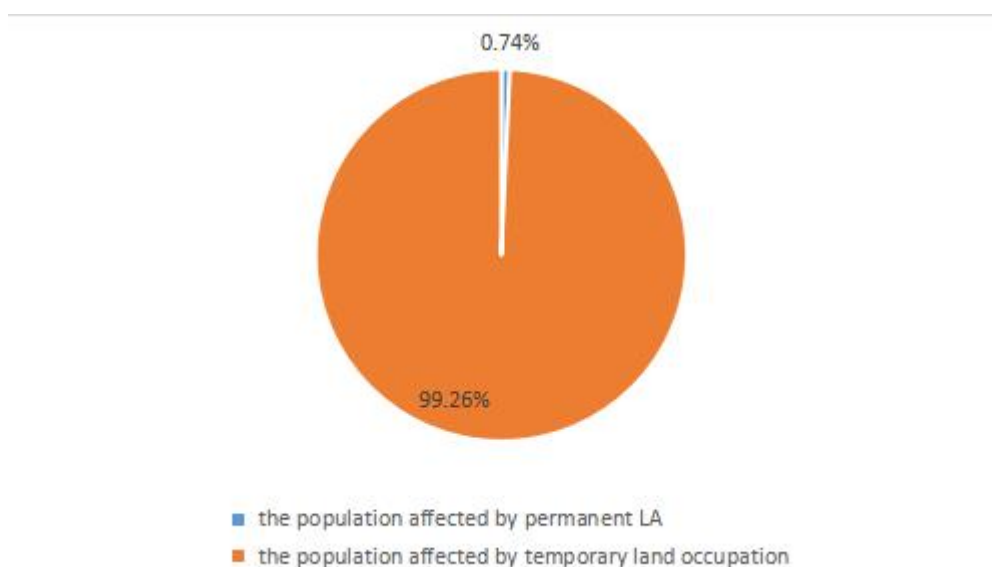


Figure 2-5 Structure of Affected Population

**Table 2-5 Households Affected by Permanent LA**

Item	Province / municipality	District / county	Township	Village	LA area (mu)	Affected	
						HHs	Population
2# valve house	Tianjin	Binhai New District	Zhongtang Town	Changliuzhuang	2.53	3	10
Daqiuozhuang distribution station	Tianjin	Jinghai District	Daqiuozhuang Town	Dongshang Dock	12.74	5	18
Jinghai relay station	Tianjin	Jinghai District	Xizhaizhuang Town	Hexin	20.58	7	21
3# valve house	Tianjin	Jinghai District	Chenguantun Town	Tancun	1.56	2	7
4# valve house	Tianjin	Jinghai District	Duliu Town	Liujiaying	2.53	3	9
5# valve house	Tianjin	Xiqing District	Xinkou Town	Xiaxinkou	2.53	3	11
6# valve house	Tianjin	Wuqing District	Wangqingtuo Town	Yijie	1.63	2	8
<b>Subtotal</b>					<b>44.29</b>	<b>25</b>	<b>84</b>
Yongqing relay station	Langfang, Hebei	Yongqing County	Bieguzhuang Town	Nanrenying	10.17	4	18
		Anci District	Diaohetou Xiang	Zhongmazhuang	17.97	7	29
Anci distribution station	Langfang, Hebei	Anci District	Yangshuiwu Xiang	Xiaocixiang	17.41	6	25
7# valve house	Langfang, Hebei	Anci District	Donggugang Town	Donggugangsi	2.6	3	12
8# valve house	Langfang, Hebei	Anci District	Geyucheng Town	Nandi	2.58	3	11
9# valve house	Langfang, Hebei	Yongqing County	Bieguzhuang Town	Jiaozhuang	2.61	3	13
10# valve house	Langfang, Hebei	Guangyang District	Jiuzhou Town	Fashang	2.66	3	11
<b>Subtotal</b>					<b>56</b>	<b>29</b>	<b>119</b>
<b>Total</b>					<b>100.1</b>	<b>54</b>	<b>203</b>

## 2.4.2 Households and Population Affected by Temporary Land Occupation

8,751 households with 27,157 persons in 84 villages in 21 townships in 8 districts / counties in 3 provinces / municipalities will be affected by temporary land occupation for the Project, including 4,947 households with 15,476 persons in Tianjin, 3,802 households with 11,674 persons in Hebei and two households with 7 persons in Beijing. See Table 2-6.

**Table 2-6 Households Affected by Temporary Land Occupation**

Province / municipality	District / county	Township	Village / entity	Occupied land area (mu)	Affected		
					HHs	Population	
Tianjin	Binhai New District	Zhongtang Town	Nantai	84	5	19	
			Beitai	126	9	35	
			Xinfangzi	159.6	15	34	
			Liutangzhuang	129.3	143	515	
			Changliuzhuang	126	137	448	
	<b>Subtotal</b>				<b>2778.15</b>	<b>309</b>	<b>1051</b>
	Jinghai District	Daqiuzhuang Town	Manjingzi	42	45	180	
			Taiping	42	46	132	
			Datun	87.75	91	273	
			Guankeng	198	213	692	
			Hulianzhuang	168	183	549	
		Tuanbo Town	Xuejiafangzi	84	97	298	
		Xizhaizhuang Town	Shunmintun	258.15	274	896	
			Yangxiaozhuang	84	96	288	
			Hexin	126	143	426	
			Anjiazhuang	84	95	260	
		Shuangtang Town	Xishuangtang	99	102	306	
			Pulou	42	43	113	
			Zhoujiayuan	42	46	120	
			Dongmoyuan	42	50	129	
		Duliu Town	Goujiaying	42	53	152	
			Wangjiaying	141	147	345	
			Yihejie	42	59	197	
			Jiushibao	213.75	233	732	

			Youhaojie	42	53	125	
			Fengyi	42	53	192	
		Chenguantun Town	Xichangtun	84	104	320	
			Wanguantun	159.6	173	592	
			Zoujiazui	84	98	334	
			Jizhuangzi	126	141	423	
			Xiaoji	84	95	315	
			Huxin Zhuang	135.3	158	490	
			Liangtou Town	Xinzhuangzi	42	51	157
		Guzhuangzi		42	46	146	
		Dongjiakou		87.15	101	350	
		Qiandengzhuang		42	51	183	
		Donghetou		126	144	388	
		Jinghai Town	Yangliyuan	99	124	372	
			Dahetan	45.15	61	173	
			Xiaokouzimen	42	55	200	
			Yidunkou	42	53	175	
		Caigongzhuang Town	Caigongzhuang	85.5	107	371	
		<b>Subtotal</b>			<b>3247.35</b>	<b>3684</b>	<b>11394</b>
		Wuqing District	Wangqingtu Town	Wang'erdian	187.5	201	604
				Sihezhuang	42	59	177
				Daogouzi	170.7	185	640
		<b>Subtotal</b>			<b>400.2</b>	<b>445</b>	<b>1421</b>
		Xiqing District	Yangliuqing Town	Xifangzi	84	91	273
			Xinkou Town	Dangcheng	42	55	185
				Shuigaozhuang	192.6	224	696
				Diliubu	126	139	456
<b>Subtotal</b>			<b>444.6</b>	<b>509</b>	<b>1610</b>		
<b>Total</b>			<b>6870.3</b>	<b>4947</b>	<b>15476</b>		
Langfang, Hebei	Anci District	Donggugang Town	Wujie	198	223	669	
			Yushuyuan	87	99	298	
			Mochagang	84	104	312	
			Guozhuang	126	143	472	



		Geyucheng Town	Xinzhuangzi	84	101	253
			Xiaguan	84	98	294
			Jiujiapu	84	106	312
			Xiaomachang	141	163	552
			Nandi	42	61	172
		Diaohetou Xiang	Halagang	129.9	139	378
			Huzhuangzi	42	55	200
			Xiaohuizhuang	141	167	568
			Xizhangzhuang	84	107	361
		Yangshuiwu Xiang	Chanfang	42	58	182
			Xichu	42	54	170
			Ciping	91.5	115	360
			Mengcun	84	107	322
			Xitaipingzhuang	42	52	160
			Chaijiawu	114	122	368
	Dabeishi		42	59	177	
	Xiaocixiang		42	56	152	
	<b>Subtotal</b>			<b>1826.4</b>	<b>2189</b>	<b>6732</b>
	Yongqing County	Bieguzhuang Town	Liuheng	84	92	328
			Nanrenying	100.5	117	368
			Guandao	39	44	136
			Shuangxiaoying	39	45	143
			Nanliuzhuang	39	42	130
Beiliuzhuang			145.65	174	622	
Jiaozhuang			78	95	286	
Hancun Town		Hengting	78	98	304	
<b>Subtotal</b>			<b>603.15</b>	<b>707</b>	<b>2317</b>	
Guangyan g District	Jiuzhou Town	Wangma	78	101	354	
		Zhaogezhuang	173.25	187	577	
		Majiawu	117	135	370	
		Nanhan	156	192	488	
		Fashang	133.05	158	420	
		Huotouying	117	133	415	
<b>Subtotal</b>			<b>774.3</b>	<b>906</b>	<b>2624</b>	

<b>Total</b>				<b>3203.85</b>	<b>3802</b>	<b>11674</b>
Beijing	Daxing District	Lixian Town	Dianzi	0.78	2	7
<b>Total</b>				<b>10074.93</b>	<b>8751</b>	<b>27157</b>

## 2.5 House Demolition

Properties of 41,900 m<sup>2</sup> will be demolished for the Project, including 38,900 m<sup>2</sup> in Tianjin, 2,500 m<sup>2</sup> in Hebei and 500 m<sup>2</sup> in Beijing. See Table 2-7.

The properties affected by the Project are non-residential properties mainly, mostly abandoned workshops. Since the Project is still at the feasibility study, and the route of the pipeline has not been fixed, the specific HD impacts will be based on the DMS.

**Table 2-7 Affected Houses**

Province / municipality	District / county	Township	Village	House size (m <sup>2</sup> )
Tianjin	Jinghai District	Tuanbo Town	Xuejiafangzi	3500
		Duliu Town	Jiushibao	5600
			Youhaojie	3800
		Chenguantun Town	Wanguantun	4000
			Zoujiazui	4000
		Liangtou Town	Dongjiakou	1500
			Dongshatou	2000
	Caigongzhuang Town	Caigongzhuang	10000	
	Xiqing District	Xinkou Town	Shuigaozhuang	4500
	<b>Subtotal</b>			
Langfang, Hebei	Guangyang District	Jiuzhou Town	Huotouying	2500
Beijing	Daxing District	Lixian Town	Dianzi	500
<b>Total</b>				<b>41900</b>

## 2.6 Ground Attachments

Ground attachments affected by the Project mainly include greenhouses, seedlings, fruit trees, tombs and telegraph poles.

### 2.6.1 Greenhouses

275 greenhouses will be affected by the Project, mostly steel frame plastic greenhouses, with a

total area of 275,000 m<sup>2</sup>. See Table 2-8.

**Table 2-8 Affected Greenhouses**

Province / municipality	District / county	Township	Village	Greenhouses
Tianjin	Jinghai District	Duliu Town	Fengyi	17
		Chenguantun Town	Jizhuangzi	20
	<b>Subtotal</b>			<b>37</b>
	Xiqing District	Xinkou Town	Dangcheng	10
			Diliubu	66
	<b>Subtotal</b>			<b>76</b>
<b>Total</b>				<b>113</b>
Langfang, Hebei	Anci District	Yangshuiwu Xiang	Ciping	15
			Mengcun	20
			Xitaipingzhuang	32
			Chaijiawu	50
			Xiaocixiang	38
	<b>Subtotal</b>			<b>155</b>
	Guangyang District	Jiuzhou Town	Majiawu	6
			Huotouying	1
	<b>Subtotal</b>			<b>7</b>
<b>Total</b>				<b>162</b>
<b>Total</b>				<b>275</b>

### 2.6.2 Seedlings

1,531.63 mu of woodland will be occupied for the Project. The seedlings on the woodland are mainly poplars, willows and locust trees, and mostly saplings with a diameter of less than 20cm. These saplings can be divided into small seedlings (diameter <5cm), medium seedlings (5-11cm) and large seedlings (11-20cm). It is estimated that the Project will affect 294,583 poplars, willows and locust trees, including 153,163 small seedlings; 84,750 medium seedlings and 56,670 large seedlings. See Table 2-9.

Table 2-9 Affected Seedlings

Province / municipality	Township	Township	Village	Wood land (mu)	Small seedlings	Medium seedlings	Large seedlings	Total
	Binhai New District		Liutangzhuang	25.8	2580	1428	955	4962
			Changliuzhuang	25.2	2520	1394	932	4847
	Jinghai District	Daqiuzhuang Town	Manjingzi	8.4	840	465	311	1616
			Taiping	8.4	840	465	311	1616
			Datun	17.55	1755	971	649	3375
			Guankeng	39.6	3960	2191	1465	7616
			Hulianzhuang	33.6	3360	1859	1243	6462
		Tuanbo Town	Xuejiafangzi	16.8	1680	930	622	3231
		Xizhaizhuang Town	Shunmintun	25.8	2580	1428	955	4962
			Yangxiaozhuang	16.8	1680	930	622	3231
			Hexin	25.2	2520	1394	932	4847
			Anjiazhuang	16.8	1680	930	622	3231
		Shuangtang Town	Xishuangtang	19.8	1980	1096	733	3808
			Pulou	8.4	840	465	311	1616
			Zhoujiayuan	8.4	840	465	311	1616

			Dongmoyuan	8.4	840	465	311	1616
		Duliu Town	Goujiaying	8.4	840	465	311	1616
			Wangjiaying	28.2	2820	1560	1043	5424
			Yihejie	8.4	840	465	311	1616
			Jiushibao	42.75	4275	2366	1582	8222
			Youhaojie	8.4	840	465	311	1616
			Fengyi	8.4	840	465	311	1616
		Chenguantun Town	Xichangtun	16.8	1680	930	622	3231
			Wangguantun	31.95	3195	1768	1182	6145
			Zoujiazui	16.8	1680	930	622	3231
			Jizhuangzi	25.2	2520	1394	932	4847
			Xiaoji	16.8	1680	930	622	3231
			Huxin Zhuang	27	2700	1494	999	5193
		Liangtou Town	Xinzhuangzi	8.4	840	465	311	1616
			Guzhuangzi	8.4	840	465	311	1616
			Dongjiakou	17.4	1740	963	644	3347
			Qiandengzhuang	8.4	840	465	311	1616
			Donghetou	25.2	2520	1394	932	4847
		Jinghai Town	Yangliyuan	19.8	1980	1096	733	3808

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			Dahetan	9	900	498	333	1731
			Xiaokouzimen	8.4	840	465	311	1616
			Yidunkou	8.4	840	465	311	1616
		Caigongzhuang Town	Caigongzhuang	17.1	1710	946	633	3289
	Wuqing District	Wangqingtu Town	Yijie	<b>0.15</b>	15	8	6	29
			Wang'erdian	37.5	3750	2075	1388	7213
			Sihezhuang	8.4	840	465	311	1616
			Daogouzi	34.2	3420	1892	1265	6578
	Xiqing District	Yangliuqing Town	Xifangzi	16.8	1680	930	622	3231
		Xinkou Town	Dangcheng	8.4	840	465	311	1616
			Shuigaozhuang	38.55	3855	2133	1426	7414
			Diliubu	25.2	2520	1394	932	4847
			Xiaxinkou	<b>2.53</b>	253	140	94	487
	Langfang, Hebei	Anci District	Donggugang Town	Donggugangsi	<b>2.6</b>	260	144	96
Wujie				39.6	3960	2191	1465	7616
Yushuyuan				17.4	1740	963	644	3347
Mochagang				16.8	1680	930	622	3231
Guozhuang				25.2	2520	1394	932	4847
Geyucheng Town			Xinzhuangzi	16.8	1680	930	622	3231

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			Xiaguan	16.8	1680	930	622	3231
			Jiujiapu	16.8	1680	930	622	3231
			Xiaomachang	28.2	2820	1560	1043	5424
			Nandi	10.98	1098	608	406	2112
		Diaohetou Xiang	Zhongmazhuang	17.97	1797	994	665	3456
			Halagang	25.95	2595	1436	960	4991
			Huzhuangzi	8.4	840	465	311	1616
			Xiaohuizhuang	28.2	2820	1560	1043	5424
			Xizhangzhuang	16.8	1680	930	622	3231
		Yangshuiwu Xiang	Chanfang	8.4	840	465	311	1616
			Xichu	8.4	840	465	311	1616
			Ciping	18.3	1830	1013	677	3520
			Mengcun	16.8	1680	930	622	3231
			Xitaipingzhuang	8.4	840	465	311	1616
	Chaijiawu		22.8	2280	1262	844	4385	
	Dabeishi		8.4	840	465	311	1616	
	Xiaocixiang		8.4	840	465	311	1616	
	Yongqing County	Bieguzhuang Town	Liheng	16.8	1680	930	622	3231
Nanrenying			24.41	2441	1351	903	4695	

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			Guandao	7.8	780	432	289	1500
			Shuangxiaoying	7.8	780	432	289	1500
			Nanliuzhuang	7.8	780	432	289	1500
			Beiliuzhuang	29.1	2910	1610	1077	5597
			Jiaozhuang	18.21	1821	1008	674	3502
		Hancun Town	Hengting	15.6	1560	863	577	3000
	Guangyang District	Jiuzhou Town	Wangma	15.6	1560	863	577	3000
			Zhaogezhuang	34.65	3465	1917	1282	6664
			Majiwu	23.4	2340	1295	866	4501
			Nanhan	31.2	3120	1726	1154	6001
			Fashang	26.55	2655	1469	982	5106
		Huotouying	23.4	2340	1295	866	4501	
Beijing	Daxing District	Lixian Town	Dianzi	14.63	1463	810	541	2814
Total				1531.63	153163	84750	56670	294,583



### 2.6.3 Fruit Trees

2,222.24 mu of garden land will be occupied for the Project. The fruit trees on the garden land are mainly apple, peach, plum and grape trees, where apple, peach and plum trees account for about 2/3, and grape trees about 1/3, including 164,446 apple, peach and plum trees, and 247,410 grape trees. These trees can be divided into full fruit, early fruit, young fruit and sapling, where each type accounts for about 1/4.

**Table 2- 10 Affected Fruit Trees**

Province / municipality	Township	Township	Village	Total	Apple / peach / plum	Grape	
Tianjin	Binhai New District	Zhongtang Town	Liutangzhuang	38.85	2875	4325	
			Changliuzhuang	37.8	2797	4208	
	<b>Subtotal</b>			<b>76.65</b>	5672	8534	
	Jinghai District	Daqiuzhuang Town		Manjingzi	12.6	932	1403
				Taiping	12.6	932	1403
				Datun	26.4	1954	2939
				Guankeng	59.4	4396	6613
				Hulianzhuang	50.4	3730	5611
		Tuanbo Town	Xuejiafangzi	25.2	1865	2806	
		Xizhaizhuang Town		Shunmintun	25.8	1909	2872
				Yangxiaozhuang	25.2	1865	2806
				Hexin	37.8	2797	4208
				Anjiazhuang	25.2	1865	2806
		Shuangtang Town		Xishuangtang	29.7	2198	3307
				Pulou	12.6	932	1403
				Zhoujiayuan	12.6	932	1403
				Dongmoyuan	12.6	932	1403
		Duliu Town		Goujiaying	12.6	932	1403
				Wangjiaying	42.3	3130	4709
				Yihejie	12.6	932	1403
				Jiushibao	64.2	4751	7148
	Youhaojie			12.6	932	1403	

			Fengyi	12.6	932	1403	
		Chengquantun Town	Xichangtun	25.2	1865	2806	
			Wanguantun	47.85	3541	5327	
			Zoujiazui	25.2	1865	2806	
			Jizhuangzi	37.8	2797	4208	
			Xiaoji	25.2	1865	2806	
			Huxinzhuang	40.65	3008	4526	
			Liangtou Town	Xinzhuangzi	12.6	932	1403
		Guzhuangzi		12.6	932	1403	
		Dongjiakou		26.1	1931	2906	
		Qiandengzhuang		12.6	932	1403	
		Donghetou		37.8	2797	4208	
		Jinghai Town	Yangliyuan	29.7	2198	3307	
			Dahetan	13.5	999	1503	
			Xiaokouzimen	12.6	932	1403	
			Yidunkou	12.6	932	1403	
		Caigongzhuang Town	Caigongzhuang	25.65	1898	2856	
		<b>Subtotal</b>		<b>922.65</b>	68276	102722	
	Wuqing District	Wangqingtuo Town	Wang'erdian	56.25	4163	6263	
				Sihezhuang	12.6	932	1403
				Daogouzi	51.15	3785	5695
		<b>Subtotal</b>		<b>120</b>	8880	13360	
	Xiqing District	Yangliuqing Town	Xifangzi	25.2	1865	2806	
		Xinkou Town	Dangcheng	12.6	932	1403	
			Shuigaozhuang	57.75	4274	6430	
			Diliubu	37.8	2797	4208	
		<b>Subtotal</b>		<b>133.35</b>	9868	14846	
	<b>Total</b>			<b>1252.65</b>	92696	139462	
Langfang, Hebei	Anci District	Donggugang Town	Wujie	59.4	4396	6613	
			Yushuyuan	26.1	1931	2906	
			Mochagang	25.2	1865	2806	
			Guozhuang	37.8	2797	4208	

		Geyucheng Town	Xinzhuangzi	25.2	1865	2806
			Xiaguan	25.2	1865	2806
			Jiujiapu	25.2	1865	2806
			Xiaomachang	42.3	3130	4709
			Nandi	12.6	932	1403
		Diaohetou Xiang	Halagang	39	2886	4342
			Huzhuangzi	12.6	932	1403
			Xiaohuizhuang	42.3	3130	4709
			Xizhangzhuang	25.2	1865	2806
		Yangshuiwu Xiang	Chanfang	12.6	932	1403
			Xichu	12.6	932	1403
			Ciping	27.45	2031	3056
			Mengcun	25.2	1865	2806
			Xitapingzhuang	12.6	932	1403
			Chaijiawu	34.2	2531	3808
	Dabeishi		12.6	932	1403	
	Xiaocixiang		12.6	932	1403	
	<b>Subtotal</b>			<b>547.95</b>	40548	61005
	Yongqing County	Bieguzhuang Town	Liuheng	25.2	1865	2806
			Nanrenying	35.88	2655	3995
			Guandao	11.7	866	1303
			Shuangxiaoying	11.7	866	1303
			Nanliuzhuang	11.7	866	1303
			Beiliuzhuang	43.65	3230	4860
			Jiaozhuang	23.4	1732	2605
		Hancun Town	Hengting	23.4	1732	2605
	<b>Subtotal</b>			186.63	13811	20778
	Guangyang District	Jiuzhou Town	Wangma	23.4	1732	2605
Zhaogezhuang			52.05	3852	5795	
Majiawu			35.1	2597	3908	
Nanhan			46.8	3463	5210	
Fashang			42.56	3149	4738	
Huotouying			35.1	2597	3908	

<b>Subtotal</b>				235.01	17391	26164
<b>Total</b>				969.59	71750	107948
Beijing	Daxing District	Lixian Town	Dianzi	0.3	22	33
<b>Total</b>				2222.24	164446	247410

## 2.6.4 Tombs

82 tombs will be affected by the Project, including 27 in Tianjin, 30 in Hebei and 25 in Beijing. See Table 2-11.

**Table 2-11 Affected Tombs**

Province / municipality	District / county	Township	Village	Tombs	
Tianjin	Jinghai District	Daqiuizhuang Town	Taiping	1	
			Guankeng	1	
		Xizhaizhuang Town	Shunmintun	1	
		Shuangtang Town	Pulou	3	
		Duliu Town	Youhaojie	2	
		Chenguantun Town	Xiaoji	1	
		Liangtou Town	Donghetou	3	
		Jinghai Town	Xiaokouzimen	1	
		Caigongzhuang Town	Caigongzhuang	2	
	<b>Subtotal</b>				<b>15</b>
	Wuqing District	Wangqingtuo Town	Wang'erdian	1	
			Sihezhuang	2	
			Daogouzi	2	
	<b>Subtotal</b>				<b>5</b>
	Xiqing District	Yangliuqing Town	Xifangzi	3	
		Xinkou Town	Dangcheng	2	
			Shuigaozhuang	1	
Diliubu			1		
<b>Subtotal</b>				<b>7</b>	
<b>Total</b>				<b>27</b>	
Langfang, Hebei	Anci District	Donggugang Town	Wujie	2	
			Mochagang	1	

		Geyucheng Town	Xinzhuangzi	2
		Diaohetou Xiang	Halagang	3
			Xiaohuizhuang	1
		Yangshuiwu Xiang	Ciping	3
			Mengcun	1
			Dabeishi	2
	<b>Subtotal</b>			<b>15</b>
	Yongqing County	Bieguzhuang Town	Nanrenying	2
			Shuangxiaoying	2
		Hancun Town	Hengting	1
	<b>Subtotal</b>			<b>5</b>
	Guangyang District	Jiuzhou Town	Wangma	2
			Zhaogezhuang	2
			Majiawu	1
			Nanhan	2
Fashang			2	
Huotouying			1	
<b>Subtotal</b>			<b>10</b>	
<b>Total</b>			<b>30</b>	
Beijing	Daxing District	Lixian Town	Dianzi	25
<b>Total</b>			<b>82</b>	

### 2.6.5 Telegraph Poles

120 telegraph poles will be affected by the Project, mostly cement poles, including 75 in Tianjin and 45 in Hebei. See Table 2-12.

**Table 2-12 Affected Telegraph Poles**

Province / municipality	District / county	Township	Village	Telegraph poles
Tianjin	Binhai New District	Haibin Sub-district	Nangang Industrial Zone	5
		Hangzhoudao Sub-district	Nangang Industrial Zone	10
		Zhongtang Town	Nantai	3
			Beitai	2
			Xinfangzi	3

			Liutangzhuang	4
			Changliuzhuang	3
	Jinghai District	Daqiuozhuang Town	Guankeng	3
			Hulianzhuang	
		Tuanbo Town	Xuejiafangzi	3
			Yangxiao-zhuang	3
			Pulou	2
		Duliu Town	Wangjiaying	3
			Yihejie	1
		Chengquantun Town	Wangguantun	2
			Zoujiazui	2
		Liangtou Town	Dongjiakou	3
		Jinghai Town	Yangliyuan	1
	Caigongzhuang Town	Caigongzhuang	2	
	Wuqing District	Wangqingtuotuo Town	Wang'erdian	4
			Sihezhuang	2
			Daogouzi	4
	Xiqing District	Yangliuqing Town	Xifangzi	2
		Xinkou Town	Dangcheng	3
			Shuigaozhuang	2
Diliubu			3	
<b>Subtotal</b>			<b>75</b>	
Langfang, Hebei	Anci District	Donggugang Town	Wujie	2
			Yushuyuan	3
			Guozhuang	4
		Geyucheng Town	Jiujiapu	2
		Diaohetou Xiang	Halagang	4
			Xiaohuizhuang	2
		Yangshuiwu Xiang	Xichu	3
			Mengcun	1
			Chaijiawu	3
	Dabeishi		1	
	Yongqing County	Bieguzhuang Town	Liheng	2
			Guandao	2
			Nanliuzhuang	3

			Jiaozhuang	1	
		Hancun Town	Hengting	2	
	Guangyang District	Jiuzhou Town		Wangma	2
				Zhaogezhuang	3
				Majiwu	2
				Nanhan	1
				Fashang	1
				Huotouying	1
	<b>Subtotal</b>			<b>45</b>	
	<b>Total</b>			<b>120</b>	

### **3. Social Impact Assessment**

#### **3.1 Overview of Potential Impacts**

The Project will ensure natural gas supply in the Beijing, Tianjin and Hebei region, promote the implementation of the national energy strategy, and support the interconnection of nationwide energy pipelines.

The Project involves 91 villages and two entities in 23 townships / sub-districts in 8 districts / counties in 3 provinces / municipalities. It involves the permanent acquisition of 154.88 mu of land, and the temporary occupation of 10,074.93 mu of land, affecting 8,805 households with 27,360 persons, in which 54 households with 203 persons will be affected by permanent LA and 8,751 households with 27,157 persons by temporary land occupation. The Project will also involve the demolition or relocation of greenhouses and tombs. In general, the land acquired for the Project is mostly collective reserved land, and few households will be affected; the period of temporary land occupation will be about 3-4 months, and the occupied land will be reclaimed in strict conformity with the approved reclamation program. Therefore, the Project will affect the affected villages and households slightly.

#### **3.2 Affected Area**

The Project will affect 3 province-level divisions, namely Tianjin Municipality, Hebei Province and Beijing Municipality. 53 villages in 13 townships in 4 districts, and two entities in two sub-districts in Tianjin Municipality, 38 villages in 7 townships in 3 districts / counties in one city in Hebei Province, and one village in one township in one district in Beijing Municipality will be affected by the Project.

8 villages in 6 townships in 4 districts in Tianjin Municipality, 7 villages in 7 townships in 3 districts / counties in one city in Hebei Province, and one village in one township in one district in Beijing Municipality will be affected by permanent LA. See Table 3-1.



Table 3-1 Area Affected by Permanent LA

No.	Item	Affected					LA area (mu)
		Province /	District	County	Township	Village (entity)	
1	First station	Tianjin	Binhai New District		Haibin Sub-district	Nangang Industrial Zone	/
2	1# valve house					Nangang Industrial Zone	
3	Nangang distribution station				Hangzhoudao Sub-district	Nangang Industrial Zone	39.96
4	2# valve house				Zhongtang Town	Changliuzhuang	2.53
5	Daqiuzhuang distribution station		Jinghai District		Daqiuzhuang Town	Dongshang Dock	12.74
6	Jinghai relay station					Guankeng	0.19
7	3# valve house				Xizhaizhuang Town	Hexin	20.58
8	4# valve house				Chenguantun Town	Tancun	1.56
9	5# valve house		Xiqing District		Duliu Town	Liujiaying	2.53
10	6# valve house					Xinkou Town	
		Wuqing District		Wangqingtuo Town	Yijie	1.63	
11	Yongqing relay station	Hebei	Langfang City	Yongqing	Bieguzhuang Town	Nanrenying	10.17
				Anci District	Diaohetou Xiang	Zhongmazhuang	17.97
12	Anci distribution station			Anci District	Yangshuiwu Xiang	Xiaocixiang	17.41
13	7# valve house				Donggugang Town	Donggugangsi	2.6
14	8# valve house				Geyucheng Town	Nandi	2.58
15	9# valve house			Yongqing	Bieguzhuang Town	Jiaozhuang	2.61
16	10# valve house	Guangyang	Jiuzhou Town	Fashang	2.66		
17	Final station	Beijing	Daxing District		Lixian Town	Dianzi	14.63

48 villages in 13 townships in 4 districts in Tianjin Municipality, 35 villages in 7 townships in 3 districts / counties in one city in Hebei Province, and one village in one township in one district in Beijing Municipality will be affected by temporary land occupation. See Table 3-2.

**Table 3-2 Area Affected by Temporary Land Occupation**

No.	Affected				Temporarily occupied land area (mu)
	Province / municipality	District / County	Township	Village (entity)	
1	Tianjin	Binhai New District	Haibin Sub-district	Nangang Industrial Zone	954
2				Beidagang Wetland Conserve	546
3			Hangzhoudao Sub-district	Nangang Industrial Zone	401.25
4				Zhongtang Town	Beidagang Wetland Conserve
5			Nantai		84
6			Beitai		126
7			Xinfangzi		159.6
8			Liutangzhuang		129.3
9			Changliuzhuang		126
10			Daqiuzhuang Town	Manjingzi	42
11		42			
12		Datun			87.75
13		Guankeng			198
14		Hulianzhuang			168
15		Tuanbo Town		Xuejiafangzi	84
16		Xizhaizhuang Town		Shunmintun	258.15
17				Yangxiaozhuang	84
18				Hexin	126
19				Anjiazhuang	84
20		Shuangtang Town	Xishuangtang	99	
21			Pulou	42	
22			Zhoujiayuan	42	
23			Dongmoyuan	42	
24		Duliu Town	Goujiaying	42	

25				Wangjiaying	141				
26				Yihejie	42				
27				Jiushibao	213.75				
28				Youhaojie	42				
29				Fengyi	42				
30				Chenguantun Town	Xichangtun	84			
31					Wangguantun	159.6			
32					Zoujiazui	84			
33					Jizhuangzi	126			
34					Xiaoji	84			
35					Huxinzhuang	135.3			
36				Liangtou Town	Xinzhuangzi	42			
37					Guzhuangzi	42			
38					Dongjiakou	87.15			
39					Qiandengzhuang	42			
40					Donghetou	126			
41				Jinghai Town	Yangliyuan	99			
42					Dahetan	45.15			
43					Xiaokouzimen	42			
44					Yidunkou	42			
45				Caigongzhuang Town	Caigongzhuang	85.5			
46				Wuqing District	Wangqingtuo Town	Wang'erdian	187.5		
47						Sihezhuang	42		
48						Daogouzi	170.7		
49				Xiqing District	Yangliuqing Town	Xifangzi	84		
50					Xinkou Town	Dangcheng	42		
51						Shuigaozhuang	192.6		
52						Diliubu	126		
53				Hebei	Lagnfang City	Anci District	Donggugang Town	Wujie	198
54								Yushuyuan	87
55								Mochagang	84
56								Guozhuang	126
57							Geyucheng Town	Xinzhuangzi	84
58								Xiaguan	84

59				Jiujiapu	84
60				Xiaomachang	141
61				Nandi	42
62				Halagang	129.9
63				Huzhuangzi	42
64				Xiaohuizhuang	141
65				Xizhangzhuang	84
66				Chanfang	42
67				Xichu	42
68				Ciping	91.5
69				Mengcun	84
70				Xitapingzhuang	42
71				Chaijiawu	114
72				Dabeishi	42
73				Xiaocixiang	42
74				Liuhe	84
75				Nanrenying	100.5
76				Guandao	39
77				Shuangxiaoying	39
78				Nanliuzhuang	39
79				Beiliuzhuang	145.65
80				Jiaozhuang	78
81				Hengting	78
82				Wangma	78
83				Zhaogezhuang	173.25
84				Majiwu	117
85				Nanhan	156
86				Fashang	133.05
87				Huotouying	117
88	Beijing	Daxing District	Lixian Town	Dianzi	0.78

### 3.3 SA Methods

In order to conduct the social impact assessment and prepare this RAP, baseline information was collected, the project area defined, stakeholders identified, and measures to alleviate negative impacts proposed by means of literature review, FGD, field visit, questionnaire survey, etc.

### 3.4 Socioeconomic Profile of the Project Area

#### 3.4.1 Tianjin Municipality

Tianjin Municipality is located in northern China and the lower Haihe River basin, being a municipality directly under the central government and the economic hub of the Bohai Sea Rim. Tianjin governs 16 districts, 124 towns, 3 Xiangs, 118 sub-districts, 3,680 villages and 1,645 communities, with a land area of 11,916.85 km<sup>2</sup>. At the end of 2018, Tianjin had a resident population of 15.596 million; in 2018, Tianjin's per capita disposable income was 39,506 yuan (42,976 yuan for urban residents and 23,065 yuan for rural residents).

52 villages in 13 townships in 4 districts in Tianjin Municipality will be affected by the Project.

##### 1) Affected districts

**Binhai New District** is located on the east coast of Tianjin, with a land area of 2270 km<sup>2</sup>, a coastline of 153km and a sea area of 3,000 km<sup>2</sup>, governing 5 state-level development zones and 21 townships, being the first free trade pilot zone, reform experimental zone and an innovation demonstration zone, with a resident population of 3 million. In 2018, the district's GDP growth was 4.4%, general public budgetary revenue 46.372 billion yuan, per capita disposable income of urban residents 49611 yuan, per capita disposable income of rural residents 23898 yuan.

**Jinghai District** is located in southwestern Tianjin, with a land area of 1,482 km<sup>2</sup>, governing 18 townships, 383 villages and 41 communities. At the end of 2018, the district's resident population was 790,100. In 2018, the district's GDP was 68.147 billion yuan, up 2.5%; per capita disposable income of urban residents 34,112 yuan, and per capita disposable income of rural residents 22,756 yuan.

**Xiqing District** is located in southwestern Tianjin, with a land area of 545 km<sup>2</sup>, governing two sub-districts, 7 towns, 160 villages and 59 communities. At the end of 2018, the district's resident population was 863,400. In 2018, the district's GDP was 98.664 billion yuan, up 1.2%, fiscal revenue 35.63 billion yuan, and per capita disposable income of urban residents 39,643 yuan.

**Wuqing District** is located in northwestern Tianjin, with a land area of 1,574 km<sup>2</sup>, governing 5 sub-districts, 24 towns. At the end of 2018, the district's resident population was 1.1915 million. In 2018, the district's GDP was 122.651 billion yuan, up 1.3%; and per capita disposable income 29,867 yuan, in which the per capita disposable income of rural residents was 23,591 yuan.

##### 2) Affected townships

13 townships in Tianjin will be affected by the Project. See Table 3-3.

##### 3) Affected villages

56 villages in Tianjin will be affected by the Project, in which 8 will be affected by permanent LA, and 48 by temporary land occupation. The main industries of the affected villages are crop cultivation and stockbreeding. 44.29 mu of farmland will be acquired permanently, including 30.62 mu of non-irrigated land, accounting for 69.14%; 6,870.3 mu of land will be occupied temporarily, including 2,283.75 mu of non-irrigated land, accounting for 33.24%. Such non-irrigated land is used

to grow corn mainly, and also grow vegetables and fruit trees. The temporarily occupied land includes 1,252.65 mu garden land, accounting for 18.29%, on which apple, peach, plum and grape trees are grown mainly. In general, wage income is the main income source, accounting for 60.4% of gross income. The villages are economically unbalanced, with per capita annual income ranging from less than 10,000 yuan to over 40,000 yuan. See Table 3-4.

### 3.4.2 Hebei Province

Yongqing County, Anci District and Guangyang District, Langfang City, Hebei will be affected by the Project.

#### 1) Affected city and districts

**Langfang City** is a prefecture-level city in Hebei Province, located in central eastern Hebei, and the middle and lower Haihe River basin, governing two districts, two county-level cities, 6 counties, 70 towns, 20 Xiangs and 17 sub-districts, with a registered population of 4.795 million. In 2018, the city's GDP was 310.82 billion yuan, up 6.5%, per capita disposable income of urban residents 40,435 yuan, and per capita disposable income of rural residents 16,865 yuan.

**Yongqing County** is located in central Hebei, and the hinterland of the Bohai Sea Rim, with a land area of 776 km<sup>2</sup>, governing 14 townships, a province-level development zone and 386 villages. At the end of 2017, the district's population was 411,000 and cultivated area 614,000 mu. In 2017, the district's GDP was 11.68 billion yuan, per capita disposable income of urban residents 32,576 yuan, per capita disposable income of rural residents 14,425 yuan.

**Anci District** is located in the south of the urban area of Langfang City, with a land area of 578.4 km<sup>2</sup>, governing 3 sub-districts, 8 townships, 4 province-level industrial parks, 284 villages and 31 communities. At the end of 2017, the district's population was 373,000 and cultivated area 484,000 mu. In 2017, the district's GDP was 19.783 billion yuan, per capita disposable income of urban residents 34,409 yuan, and per capita disposable income of rural residents 15,232 yuan.

**Guangyang District** is located in the north of the urban area of Langfang City, being the political, economic and cultural center of Langfang City, with a land area of 361.89 km<sup>2</sup> and a population of 496,000, governing 5 sub-districts, 3 towns, and one economic and technological development zone. In 2017, the district's GDP was 30.15 billion yuan, per capita disposable income of urban residents 4,0478 yuan, and per capita disposable income of rural residents 16,038 yuan.

#### 2) Affected townships

7 townships in Langfang City, Hebei will be affected by the Project. See Table 3-5.

#### 3) Affected villages

38 villages in Hebei will be affected by the Project, in which 7 will be affected by permanent LA, and 35 by temporary land occupation. In the affected villages, vegetable and fruit cultivation is developed. 56 mu of land will be acquired permanently, including 30.07 mu of woodland, accounting for 53.70%. See Table 3-6.

### 3.4.3 Beijing Municipality

Beijing Municipality is the political, cultural, diplomatic and innovation center of China, and a modern international metropolis, located in northern China, with a land area of 16,410.54 km<sup>2</sup>, governing 16 districts. Dianzi Village, Lixian Town, Daxing District will be affected by the Project.

**Daxing District** is located in southern Beijing, with a land area of 1,031 km<sup>2</sup>, governing 8 sub-districts and 9 towns. At the end of 2018, the district's resident population was 1.796 million and a cultivated area of 576,000 mu. In 2018, the district's GDP was 70.04 billion yuan, up 7%, and per capita disposable income 43,464 yuan.

**Lixian Town** is located in southern Daxing District, with a land area of 96 km<sup>2</sup>, a resident population of 40,261 and a cultivated area of 86,000 mu, governing 45 villages.

Dianzi Village is located in eastern Lixian Town, with 260 households with 1,045 persons. The main income source is fruit tree cultivation, including apple, apricot, orange, etc.

**Table 3-3 Profile of Affected Townships in the Tianjin Project Area in 2018**

Township	Location	Land area (km <sup>2</sup> )	Villages	Population	Minority population		Per capita annual income (yuan)	Per capita cultivated area (mu)
					Percent	Ethnic group		
Zhongtang Town	Southwestern Binhai New District	89	24	57300	1		19000	2
Daqiuozhuang Town	Southeastern Jinghai District	119	26	35000	1	Hui, Mongolian	20000	2
Tuanbo Town	Eastern Jinghai District	72	8	10000	2	Hui	20000	4
Xizhaizhuang Town	Central southern Jinghai District	72	17	14000	0		19000	2.7
Shuangtang Town	Central Jinghai District	41	10	14365	0		26146	2.1
Duliu Town	Northern Jinghai District	64.4	28	37000	0		16000	2
Chenguantun Town	Southern Jinghai District	92.5	24	31700	1		13000	3
Liangtou Town	Western Jinghai District	84.7	18	21379	0		20300	3.6
Jinghai Town	Northern Jinghai District	80.2	71	129103	1		26000	2.3
Caigongzhuang Town	Southeastern Jinghai District	63.5	16	21000	0.01	Hui, Mongolian	15000	1.5
Wangqingtu Town	Southwestern Wuqing District	52	22	41074	0.2		26700	1.3
Yangliuqing Town	Xiqing District	64	43	161000	0		32700	3.6
Xinkou Town	Southwestern Xiqing District	62.8	19	37343	1		21867	1.4



Table 3-4 Profile of Affected Villages in the Tianjin Project Area in 2018

District / county	Township	Village	HHs	Resident population	Minority population		Per capita annual income (yuan)	Income source	Main industry	Per capita cultivated area (mu)
					Percent	Ethnic group				
Jinghai District	Daqiu Zhuang Town	Manjingzi	218	1800	0		15000	Farming	Agriculture	5
		Taiping	400	160	0		5000	Employment	Agriculture	2
		Datun	1500	500	2		5000	Employment	Industry	1
		Guankeng	226	706	1	Manchu	45000	Farming, employment	Agriculture	3
		Hulianzhuang	1000	3500	0		13500	Employment	Iron and steel	3
	Tuanbo Town	Xuejiafangzi	105	312	0		12000	Farming	Agriculture	3.37
	Xizhaizhuang Town	Shunmintun	500	1500	1	Tujia	20000	Employment	Agriculture	3
		Yangxiaozhuang	370	10002	0		13000	Farming	Agriculture	3
		Hexin	396	970	0		11000	Farming	Agriculture	4.1
		Anjiazhuang	660	1700	0		19000	Farming, employment	Agriculture	3
	Shuangtang Town	Dongshuangtang	1170	3600	0		27000	Farming, employment	Agriculture	2.7
		Xishuangtang	308	1360	0		100000	Employment	Tourism	5
		Pulou	364	880	0.2	Mongolian	35000	Farming, employment	Agriculture	2.7
		Zhoujiayuan	142	394	0		20000	Farming	Agriculture	4.6
		Dongmoyuan	302	806	2		50000	Farming	Agriculture	3.8
	Duliu Town	Shenglijie	600	1700	3	Hui	20000	Employment	Machining,	1.9

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									cultivation	
		Yihejie	980	2580	0		15000	Employment	Industry, agriculture	1.5
		Jiushibao	407	1312	0		15000	Agriculture	Vegetables	1.6
		Minzhujie	560	1623	0		8000	Employment	Construction, cultivation	1.9
		Tuanjiejie	750	2100	0.1	Hui	10000	Agriculture	Vegetables	1.5
	Chenguantun Town	Xichangtun	490	1500	0		12000	Farming, employment	Agriculture	3.8
		Wangguantun	900	12479	1	Korean	11000	Cultivation	Agriculture	1
		Jizhuangzi	443	2369	0		15000	Employment	Agriculture	2
		Xiaoji	442	68	0		12600	Farming, employment	Cultivation	3
		Huxin Zhuang	550	1900	0		60000	Employment, cultivation	Agriculture	3.5
	Liangtou Town	Xinzhuangzi	478	888	0		18000	Farming, employment	Agriculture	2.6
		Guzhuangzi	462	1300	0		13000	Farming, employment	Agriculture	2.5
		Dongjiakou	600	1831	0		54000	Employment, land transfer	Agriculture	2.5
		Donghetou	500	2930	0		18000	Farming, employment	Agriculture	3
	Jinghai Town	Yangliyuan	196	619	1		25000	Farming, employment	Agriculture	0.7
		Dahetan	147	1383	0		10000	Farming	Cultivation	1.379

		Xiaokouzimen	95	244	0		16000	Farming, employment	Cultivation	1.8
		Yidunkou	171	469	0		15000	Farming, employment	Fruit trees	1.1
Xiqing District	Xinkou Town	Dangcheng	2200	7500	0.2		15000	Farming	Agriculture	2
		Shuigaozhuang	1865	5864	1		20000	Farming	Agriculture	1
		Diliubu	1100	4500	1	Manchu	20000	Farming	Agriculture	1.7

Table 3-5 Profile of Affected Townships in the Hebei Project Area in 2018

Township	Location	Land area (km <sup>2</sup> )	Villages	Population	Minority population		Per capita annual income (yuan)	Per capita cultivated area (mu)
					Percent	Ethnic group		
Donggugang Town	Southern Anci District	64.4	30	3.8	2	Hui	5000	1.2
Geyucheng Town	Southern Anci District	80.5	36	3.9	2	Manchu, Mongolian	8000	1.4
Diaohetou Xiang	Southern Anci District	62.0	30	2.2	2	Manchu	11000	1.5
Yangshuiwu Xiang	Southern Anci District	92.1	49	4.0	2	Hui	6320	1.8
Bieguzhuang Town	Eastern Yongqing County	99.5	36	2.9	0		15781	2
Hancun Town	Northeastern Yongqing County	90.6	34	2.8	2	Hui	8000	1.2
Jiuzhou Town	Western Guangyang District	133.0	70	6.0	3	Hui	28000	3.0

Table 3-6 Profile of Affected Villages in the Hebei Project Area in 2018

District / county	Township	Village	HHs	Resident population	Minority population		Per capita annual income (yuan)	Income source	Main industry	Per capita cultivated area (mu)
					Percent	Ethnic group				
Anci District	Donggugang Town	Wucun	300	1100	0		6080	Employment	Handicrafts	1.7
		Guozhuang	800	2217	0		9800	Farming	Agriculture	2
		Sicun	105	807	0		9000	Farming	Agriculture	2
		Yushuyuan	51	209	0		8500	Farming	Agriculture	2.1
		Mochagang	207	1700	0		9000	Farming	Agriculture	1.7
	Geyucheng Town	Xinzhuangzi	337	1100	0		15000	Farming, employment	Agriculture	1.62
		Xiaomachang	160	555	0		13600	Farming, employment	Agriculture	1.9
		Xiaguan	450	1500	0		1000	Farming, employment	Agriculture	1.2
		Guochang	230	500	5	Manchu, Mongolian	6000	Farming	Agriculture	1.4
		Nandi	240	810	1	Buyi	35000	Farming, employment	Agriculture	1.7
	Diaohetou Xiang	Xiaoshenzhuang	117	535	0		12000	Farming	Agriculture	1.5
		Halagang	276	982	0		18000	Farming	Agriculture	2.1
		Huangdi	370	1200	0		7000	Farming	Cultivation	1.6
		Huzhuangzi	89	340	2	Manchu	6800	Farming	Agriculture	1.9
		Zhongmazhuang	232	767	0		7200	Employment	Agriculture	1.8
	Yangshuiwu Xiang	Chaijiawu	198	786	0		8000	Farming	Agriculture	1.3
		Mengcun	340	1300	0		10000	Commercial crops	Agriculture	1.5
		Nanciping	128	500	1	Manchu	5000	Farming	Agriculture	1.2

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		Chanfang	176	680	0		12000	Farming, employment	Agriculture	1.71
		Dabeishi	486	1572	0		7000	Commercial crops	Agriculture	1.1
		Xitapingzhuang	321	864	0		9700	Employment	Agriculture	1.6
		Xiaocixiang	322	965	0		12000	Employment	Agriculture	1.4
Yongqing County	Bieguzhuang Town	Nanrenying	60	273	0		18000	Farming	Agriculture	2.7
		Nanliuzhuang	90	371	0		8000	Farming	Agriculture	1.4
		Beiliuzhuang	186	594	0		17800	Farming	Agriculture	1.9
		Guandao	120	480	0		15000	Farming	Agriculture	1.75
		Shuangxiaoying	240	860	0		15000	Farming	Agriculture	1.64
		Liuheng	54	132	0		15000	Agriculture	Fruit trees	4
	Hancun Town	Hengting	167	500	0		8000	Farming	Agriculture	1.3
Guangyang District	Jiuzhou Town	Fashang	260	1100	0		12400	Agriculture	Agriculture	1.5
		Gaoxinzhuang	800	3000	0		8000	Agriculture	Agriculture	2.5
		Zhaogezhuang	507	2300	0		8000	Farming	Fruit trees	1.7
		Wangma	206	770	0		7000	Agriculture	Agriculture	3
		Majiawu	243	800	0		8000	Farming	Agriculture	1.7
		Nanhan	365	1680	0		12000	Farming	Fruit trees	1.7

### 3.5 Basic Information of Sample Households

Since the owner and the task force have conducted information disclosure and a socioeconomic survey in over 60% of the affected villages, a questionnaire survey on about 5% of the APs, and collected comments and suggestions from the APs extensively, the task force conducted a questionnaire survey, the public participation and consultation in Xichangtun Village, Chenguantun Town, Jinghai District; Guankeng Village, Daquizhuang Town, Jinghai District, Tianjin; and Nandi Village, Geyucheng Town, Anci District and Nanrenying Village, Bieguzhuang Town, Yongqing County, Langfang City, Hebei affected by permanent LA, covering population, education, employment, houses and properties, annual income and expenditure, awareness of and attitude to the Project, expectations for LA and compensation, etc.

#### 3.5.1 Population

The questionnaire survey was conducted on 52 households with 198 persons, with an average population of 3.85 per household, all being Han people, including 106 females, accounting for 53.54%, and 92 males, accounting for 46.46%.

Among the 198 samples, 27 are aged below 16 years, accounting for 13.6%, including 12 males, accounting for 12.5% of all males, and 15 females, accounting for 14.7% of all females; 66 aged 16-40 years, accounting for 33.3%, including 33 males, accounting for 34.4% of all males, and 33 females, accounting for 32.4% of all females; 75 aged 41-60 years, accounting for 37.9%, including 37 males, accounting for 38.5% of all males, and 38 females, accounting for 37.3% of all females; and 30 aged 60 years or above, accounting for 15.2%, including 14 males, accounting for 14.6% of all males, and 16 females, accounting for 15.7% of all females. See Table 3-7.

**Table 3-7 Gender and Age Distribution**

Age	Male		Female		Total	
	N	Percent (%)	N	Percent (%)	N	Percent (%)
<16 years	12	12.5	15	14.7	27	13.6
16-40 years	33	34.4	33	32.4	66	33.3
41-60 years	37	38.5	38	37.3	75	37.9
>=60 years	14	14.6	16	15.7	30	15.2
<b>Total</b>	<b>96</b>	<b>100.00</b>	<b>102</b>	<b>100.00</b>	<b>198</b>	<b>100.00</b>

#### 3.5.2 Education

This survey item is for the population aged 16 years or above.

Among the 198 samples, 171 are aged 16 years or above, accounting for 86.36%, including 84 males, accounting for 49.12%; and 87 females, accounting for 50.88%.

Among the 171 samples aged 16 years or above, 11 are illiterate, accounting for 6.4%; 34 have received primary school education, accounting for 19.9%; 92 have received junior high school

education, accounting for 53.8%; 20 have received senior high or technical secondary school education, accounting for 11.7%; 7 have received junior college, accounting for 4.1%; and 7 have received undergraduate or above education, accounting for 4.1%. See Table 3-8.

**Table 3-8 Educational Levels of Population Aged 16 Years or Above**

Educational level	Population			Percent (%)
	Male	Female	Total	
Illiterate	4	7	11	6.4
Primary school	16	18	34	19.9
Junior high school	44	48	92	53.8
Senior high / technical secondary school	12	8	20	11.7
Junior college	6	1	7	4.1
Undergraduate or above	2	5	7	4.1
<b>Total</b>	<b>84</b>	<b>87</b>	<b>171</b>	<b>100.00</b>

### 3.5.3 Employment

This survey item is for the population aged 16 years or above.

Among the 171 samples aged 16 years or above, 140 are employed, accounting for 81.87%; and 31 unemployed, accounting for 18.13%.

Among the 140 employed samples, there are 79 males, accounting for 56.43%; and 61 females, accounting for 43.57%, including one public institution worker, accounting for 1.4%; 14 enterprise employees, accounting for 10%; 11 self-employers, accounting for 9.48%; 9 farmers, accounting for 7.76%; 77 casual laborers, accounting for 66.38%; two 2 farmers / casual laborers, accounting for 1.72%; and 5 other persons (soldiers and village officials), accounting for 4.31%.

Among the 31 unemployed samples, there are 5 males, accounting for 16.13%; and 26 females, accounting for 83.87%, including one retiree, accounting for 3.2%; 16 housekeepers, accounting for 51.6%; one waiting for school enrollment, accounting for 3.2%; 7 unemployed persons, accounting for 22.6%; and 6 students, accounting for 19.4%. See Table 3-9.

**Table 3-9 Employment of Population Aged 16 Years or Above**

Item	Population			Percent (%)	
	Male	Female	Subtotal		
<b>Employed population</b>	Public institution worker	1	1	2	1.4
	Enterprise employee	12	2	14	10
	Private business owner	4	5	9	6.4
	Self-employer	9	4	13	9.3
	Farmer	18	26	44	31.4

	Casual laborer	6	5	11	7.7
	Farmer / casual laborer	29	18	47	33.6
	<b>Total</b>	<b>79</b>	<b>61</b>	<b>140</b>	<b>100.00</b>
<b>Unemployed population</b>	Retiree	1	0	1	3.2
	Housekeeper	0	16	16	51.6
	Waiting for school enrollment	0	1	1	3.2
	Unemployed	2	5	7	22.6
	Student	2	4	6	19.4
	<b>Total</b>	<b>5</b>	<b>26</b>	<b>31</b>	<b>100.00</b>
<b>Total</b>		<b>84</b>	<b>87</b>	<b>171</b>	---

### 3.5.4 Houses and Properties

The 52 sample households have an average house size of 162.29 m<sup>2</sup> per household or 42.62 m<sup>2</sup> per capita. An average household has 1.31 TV sets, 1.1 refrigerator, 2.33 air-conditioners, 1.13 washing machines, 0.88 PC, 3.15 mobile phones, 0.94 motorcycle / electric bicycle, and 0.81 car. Two sample households have a store of 96 m<sup>2</sup> and 80 m<sup>2</sup> respectively. The sample households lead a good life in general.

### 3.5.5 Income and Expenditure

The annual average income of the 52 sample households is 98,715 yuan, and the annual average expenditure 49,052 yuan, accounting for 49.69% of annual average income. Most of the sample households have good income, and more than half of their income can be used for savings or investment. Over 3/4 of their income is from male laborers. Productive and nonproductive expenses account for about 30% and 70% of household expenditure respectively, mainly including educational, marriage, medical and housing expenses. See Table 3-10.

**Table 3-10 Household Income and Expenditure**

Item	Amount (yuan per annum)		
	Male	Female	Total
Income	75415	23300	98715
Expenditure	Productive expenses	Nonproductive expenses	Total
	15394	33658	49052

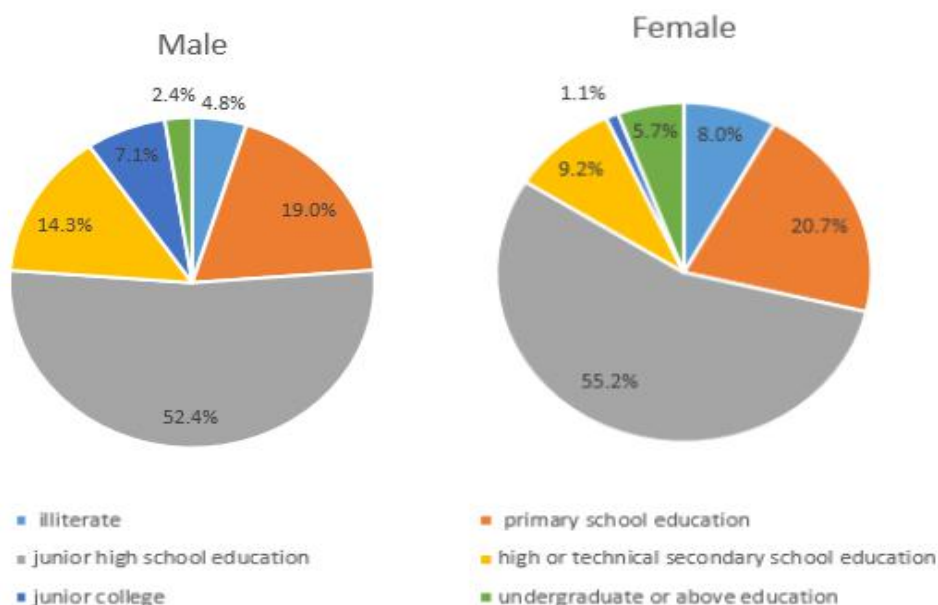
### 3.5.6 Women's Status

During the socioeconomic survey, the task force paid particular attention to local women's status, including their education, employment, income, family and social status, public participation, etc.

The overall educational level of women is slightly lower than that of men. Among the 87 females, 7 are illiterate, accounting for 8%; 18 have received primary school education, accounting

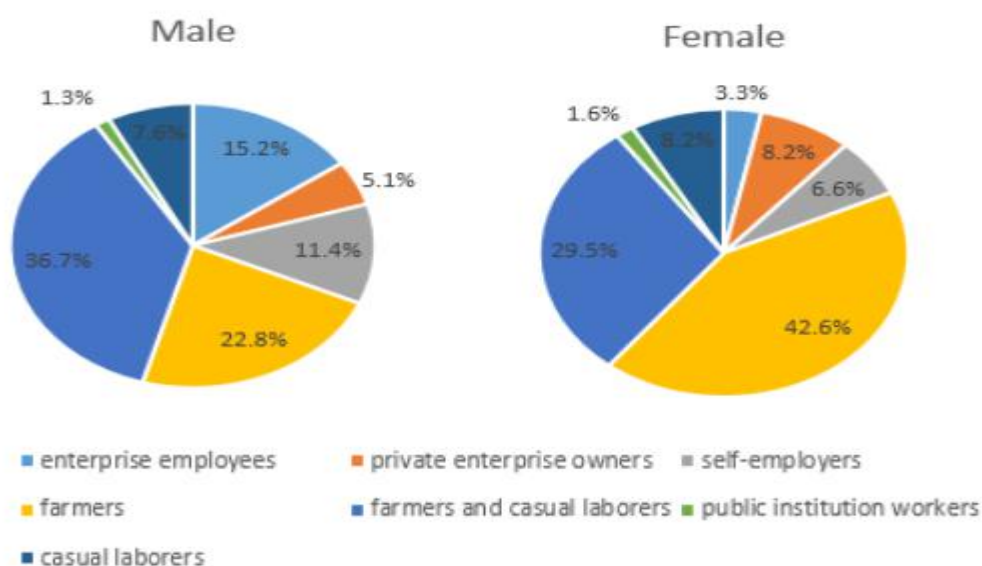


for 20.7%; 48 have received junior high school education, accounting for 55.2%; 8 have received senior high or technical secondary school education, accounting for 9.2%; one has received junior college, accounting for 1.1%; and 5 have received undergraduate or above education, accounting for 5.7%. Among the 87 males, 4 are illiterate, accounting for 4.8%; 16 have received primary school education, accounting for 19%; 44 have received junior high school education, accounting for 52.4%; 12 have received senior high or technical secondary school education, accounting for 14.3%; 6 have received junior college, accounting for 7.1%; and two have received undergraduate or above education, accounting for 2.4%. See Figure 3-1.



**Figure 3-1 Comparison of Educational Levels of Females and Males**

Among the 140 employed samples, 56.43% are males and 43.57% females; among the 31 unemployed samples, 16.13% are males and 83.87% females. It can be seen that men are the main contributor to household income, and women are the main force of housework. 15.2% of the male respondents are enterprise employees, while this percentage is 3.3% for the females; 5.1% of the male respondents are private enterprise owners, while this percentage is 8.2% for the females; 11.4% of the male respondents are self-employers, while this percentage is 6.6% for the females; 22.8% of the male respondents are farmers, while this percentage is 42.6% for the females; 36.7% of the male respondents are farmers and casual laborers, while this percentage is 29.5% for the females; in addition, the percentages of the males and females being public institution workers and casual laborers are roughly the same. It can be seen that despite of some differences in employment, there is no significant gender discrimination in employment. See Figure 3-2.



**Figure 3-2 Occupations of Females and Males**

In the average household income of 98,715 yuan, 75,415 yuan is from men, accounting for 76.4%; and 23,300 yuan from women, accounting for 23.6%; it can be seen that the income generated by women is much lower than that generated by men, as shown in Table 3-10. All the 16 respondents not employed due to housework are women, as shown in Table 3-9, in which one is aged above 60 years, accounting for 6.25%; one aged 40-60 years, accounting for 6.25%; and 14 aged below 40 years, accounting for 87.5%. The unemployed women are mostly aged below 40 years, because they have to take care of children and do housework. This is mainly due to the family division of labor, where women usually do housework, and take care of old people and children mainly, while men are usually employed.

Local women play an important role in both family and social life. Most of the female respondents are aware of and support the Project, and have expressed their opinions and suggestions on the Project. Like the males, they expect compensation to be paid timely and fully. Young women expect skills training in order to do stable and higher-income jobs nearby, while middle-aged and old women expect jobs suitable for them after the completion of the Project. In general, all women expect to do a suitable job while taking care of the family.

### 3.5.7 Vulnerable Groups

According to the survey, there is neither minority population nor MLS household among the households affected by permanent LA. An AH in Jinghai District, Tianjin has a disabled member, who is the second son of the household head, 42 years. His father is 71 years old and his mother 68 years old, both healthy and able to work; his elder brother is 48 years, and his elder brother's wife 49 years, running a supermarket in the village; his nephew is 24 years, unmarried, and works outside after university graduation. His family has two color TV sets, two refrigerators, two air-conditioners, two washing machines, a PC, 4 mobile phones, a motorcycle, 3 stores totaling 96 m<sup>2</sup> (used as the supermarket), and a house of 116 m<sup>2</sup>; his family's annual income is about 65,000 yuan, and annual expenditure about 32,000 yuan. Some land of his family may be occupied for the

Project. He has a stable income house, and is taken care of by his family. The Project will not affect his life.

### 3.6 Project Impact Analysis

The Project will affect 88 villages in 23 townships in 3 provinces / municipalities, 154.88 mu of land will be acquired permanently and 10,074.93 mu occupied temporarily, thereby affecting the AHs to some extent.

#### 3.6.1 Impact Analysis of Permanent LA

154.88 mu of land will be acquired permanently for the Project, including 39.99 mu of construction land, accounting for 25.82%; and 114.89 mu of farmland, accounting for 74.18%.

The acquired land includes 51.26 mu of cultivated land, accounting for 33.1%; 8.39 mu of garden land, accounting for 5.42; 47.38 mu of woodland, accounting for 30.59%; and 7.85 mu of irrigation and road land, accounting for 5.07%.

54 households with 203 persons will be affected by permanent LA, where 84.25 mu of land in 7 villages in 7 townships in 4 districts in Tianjin will be acquired, including 44.29 mu of farmland, affecting 25 households with 84 persons; 56 mu of land in 7 villages in 7 townships in 3 districts / counties in one city in Hebei Province will be acquired, including 55.97 mu of farmland, affecting 29 households with 119 persons; 14.63 mu of land in one village in one township in one district in Beijing Municipality will be acquired, being collective mobile land, affecting no one. See Table 3-11.

LA for the Project will reduce the collective cultivated areas of the affected villages. However, the distribution stations, relay stations and valve houses have small floor areas, in which 20.58 mu of land will be acquired for the largest station – the Jinghai relay station, including 17.78 mu of cultivated land, accounting for 1% of the village's cultivated area only. All the affected villages will have land loss rates of 2%, so LA for the Project will affect these villages slightly.

Among the AHs, 6 households with 25 persons will have land loss rates of 40-50%, accounting for 12.32%; 7 households with 29 persons will have land loss rates of 31%-40%, accounting for 14.29%; 12 households with 39 persons will have land loss rates of 21-30%, accounting for 19.21%, 22 households with 93 persons will have land loss rates of 11-20%, accounting for 45.81%; and 5 households with 17 persons will have land loss rates of 10% or less, accounting for 8.37%. In general, over half of the APs will have land loss rates of below 20%. See Table 3-12.

**Table 3-12 Impact Analysis of Permanent LA**

No.	HHS	Population	Land loss rate	Percentage to all APs
1	6	25	41%-50%	12.32%
2	7	29	31%-40%	14.29%
3	12	39	21%-30%	19.21%
4	22	93	11%-20%	45.81%
5	5	17	10% or less	8.37%
Total	52	203		1

Table 3-11 Impacts of Permanent LA

Item	Location	LA area (mu)	Construction land (mu)	Farmland (mu)				Affected		Per capita cultivated area (mu)	Per capita LA area (mu)	Land loss rate (%)	
				Cultivated land	Garden land	Wood land	Irrigation and road land	HHs	Population				
First station / 1# valve house	Tianjin	Nangang Industrial Zone, Binhai New District	/	/	/	/	/	/	/	/	/	/	
Nangang distribution station		Nangang Industrial Zone, Binhai New District	39.96	39.96					0	0			
2# valve house		Changliuzhuang Village, Zhongtang Town, Binhai New District	2.53		1.87			0.66	3	10	2	0.19	9.35
Daqiuzhuang distribution station		Dongshang Dock Village, Daqiuzhuang Town, Jinghai District	12.74		9.49			3.25	5	18	2	0.53	26.36
		Guankeng Village, Daqiuzhuang Town, Jinghai District	0.19					0.19					
Jinghai relay station		Hexin Village, Xizhaizhuang Town, Jinghai District	20.58		17.78			2.8	7	21	4.1	0.85	20.65
3# valve house		Tancun Village, Chenguantun Town, Jinghai District	1.56		1.29			0.27	2	7	3	0.18	6.14
4# valve house		Liujiaying Village, Duliu Town, Jinghai District	2.53		2.06			0.47	3	9	2	0.23	11.44
5# valve house		Xiaxinkou Village, Xinkou Town, Xiqing District	2.53				2.53		3	11	1.4	0.23	16.43

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6# valve house		Yijie Village, Wangqingtu Town, Wuqing District	1.63		1.37		0.15	0.11	2	8	1.3	0.19	14.62	
Yongqing relay station	Langfang, Hebei	Nanrenying Village, Bieguzhuang Town, Yongqing County	10.17	0.03		5.73	4.31	0.1	4	18	3.56	0.56	15.67	
		Zhongmazhuang Village, Diaohetou Xiang, Anci District	17.97				17.97			7	29	1.8	0.62	34.43
Anci distribution station		Xiaocixiang Village, Yangshuiwu Xiang, Anci District	17.41		17.41					6	25	1.4	0.70	49.74
7# valve house		Donggugangsi Village, Donggugang Town, Anci District	2.6				2.6			3	12	2	0.22	10.83
8# valve house		Nandi Village, Geyucheng Town, Anci District	2.58				2.58			3	11	1.74	0.23	13.48
9# valve house		Jiaozhuang, Bieguzhuang Town, Yongqing County	2.61				2.61			3	13	1.3	0.20	15.44
10# valve house		Fashang Village, Jiuzhou Town, Guangyang District	2.66			2.66				3	11	1.5	0.24	16.12
Final station	Beijing	Dianzi Village, Lixian Town, Daxing District	14.63	14.63	0		14.63	0						
Total			154.88	39.99	51.27	8.39	47.38	7.85	54	203		0.53		

### 3.6.2 Impact Analysis of Temporary Land Occupation

10,074.93 mu of land will be occupied temporarily for the Project. 6,870.3 mu of land in 48 villages in 13 townships in 4 districts in Tianjin will be occupied temporarily, affecting 4,947 households with 15,476 persons; 1,826.4 mu of land in 35 villages in 7 townships in 3 districts / counties in one city in Hebei will be occupied temporarily, affecting 3,802 households with 11,674 persons; 0.78 mu of land in one village in one township in one district in Beijing will be occupied temporarily, affecting two households with 7 persons.

Since the pipeline is 229km long, and its construction zone is about 28m wide, temporary land occupation will affect a large area and a large population. However, the occupation period is short (3-4 months), it will affect the affected villages and households slightly. However, road excavation, material storage and vehicle rolling will affect local vegetation and soil structure to some extent, thereby affecting future local production.

### 3.6.3 Impact Analysis of House Demolition

Permanent LA and temporary land occupation for the Project do not involve the demolition of any residential house, but may involve the demolition of some non-residential properties, mostly abandoned workshops. A safety distance will be kept from local working and living areas during the construction of the Project, thereby not involving the demolition of residential houses or the relocation of workplaces.

### 3.6.4 Impact Analysis of Attachments

Except some crops (corn mainly) and some trees (mostly poplars, willows and locust trees), the Project will involve the relocation or demolition of 123 telegraph poles, 275 greenhouses and 82 tombs.

The relocation of telegraph poles will be planned in advance in order not to affect power supply.

The demolition of greenhouses for the Project will cause financial losses and affect production temporarily.

Tomb relocation will involve local customs and personal feelings, and may have a negative impact if not handled properly.

## 3.7 Alleviation Measures

For the above potential negative impacts, the following alleviation measures are proposed:

First, strengthen communication with the APs to protect their rights of information and participation. While strengthening information disclosure, their attitudes to, comments on and expectations for the Project will be collected to protect their rights, especially vulnerable groups.

Second, conduct permanent LA fairly, openly and justly in strict conformity with the statutory procedures and compensation rates. Fix compensation rates for temporary land occupation through consultation with the affected villages and households, or based on third party appraisal with the

assistance of local township governments, and pay compensation fully before the commencement of construction. Compensate for the temporarily occupied land within 5m on both sides of the pipeline permanently.

Third, conduct resettlement properly to ensure that the APs' living standard is not reduced and their long-term livelihoods are secure.

Fourth, take multiple measures to alleviate impacts during construction: Conduct construction before spring sowing and after autumn harvest in rural areas; set up warning signs and bulletin boards on the boundary of construction and protected areas, and restrict the movement of construction workers and vehicles to reduce construction impacts; take such measures as horn prohibition, speed restriction, and solid waste and wastewater control near construction sites.

Fifth, ensure the quality of land reclamation in strict conformity with the reclamation program approved by the natural resources and planning authority to recover the original cultivation conditions, such as peeling top soil for occupied cultivated land and woodland, and using it for land reclamation.

## 4. Resettlement Policy Framework

This RAP has been prepared in accordance with AIIB's ESF, the applicable laws, regulations and policies of the PRC, and the local regulations and policies of Tianjin Municipality, Hebei Province and Beijing Municipality. This RAP will be implemented in strict conformity with these policies, and any change during implementation will be reported to AIIB.

### 4.1 Laws, Regulations and Policies of the PRC

See Table 4-1 for the laws, regulations and policies applicable to the Project.

**Table 4-1 National Laws, Regulations and Policies on Land Acquisition and Resettlement**

Level	Policy document	Effective date
State	Land Administration Law of the PRC (amended on August 26, 2019)	2004.8.28
	Regulations on the Implementation of the Land Administration Law of the PRC (Decree No.256 of the State Council)	1998.12.27
	Real Right Law of the PRC	2007.10.1
	Forest Law of the PRC	1985.1.1
	Regulations on the Implementation of the Forest Law of the PRC	2000.01.29
	Regulations on the Protection of Oil and Gas Pipelines	2001.8.2
	Decision of the State Council on Deepening the Reform and Rigidly Enforcing Land Administration (SC [2004] No.28)	2004.10.21
	Guidelines on Improving Compensation and Resettlement Systems for Land Acquisition (MLR [2004] No.238)	2004.11.3
	Notice of the Ministry of Land and Resources on Doing a Better Job in LA Management (MLR [2010] No.96)	2010.6.26
	Notice of the Ministry of Labor and Social Security, and the Ministry of Land and Resources on Doing a Practical Job in Social Security for Land-expropriated Farmers (MLSS [2007] No.14)	2007.4.28
	Regulations on the Expropriation of Houses on State-owned Land and Compensation Therefor (Decree No.590 of the State Council)	2011.1.21
Tianjin Municipality	Land Administration Regulations of Tianjin Municipality	1999.9.26
	Notice of the General Office of the Tianjin Municipal Government on Further Strengthening Land Acquisition Management (TMGO [2017] No.33)	2017.3.7
	Notice of the Tianjin Municipal Government on Adjusting Location-based Prices for Acquired Land of Tianjin Municipality (TMG [2014] No.20)	2014.9.10
	Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality (TMLRB [2014] No.36)	2014.2.14
	Measures of Tianjin Municipality for the Implementation of the Forest Law of the PRC	2004.1.1.
	Interim Measures for Social Security for Land-expropriated Farmers of Tianjin	2004.12.10



	Municipality (TMG [2004] No.112)	
	Measures for the Implementation of Basic Endowment Insurance for Urban and Rural Residents of Tianjin Municipality (TMLSS [2014] No.89)	2014.10.15
	Notice on Levels of Contribution to Basic Endowment Insurance Premiums for Urban and Rural Residents by Land-expropriated Farmers (TMLSS [2018] No.17)	2018.4.20
	Regulations on the Expropriation of Houses on State-owned Land and Compensation Therefor	2011.6.1
	Land Acquisition Procedure of Tianjin Municipality	2019.1.24
Hebei Province	Land Administration Regulations of Hebei Province (2014 Amendment)	2005.5.27
	Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land (HPG [2008] No.132)	2009.1.1
	Notice of the Hebei Provincial Government on Revising Location-based Prices for Acquired Land	2015.5.29
	Measures of Hebei Province for the Implementation of the Forest Law of the PRC (2018 Amendment)	2000.9.27
	Notice of the Hebei Provincial Finance Department on Adjusting Forest Vegetation Restoration Fees (HPFD [2016] No.25)	2016.04.29
	Opinions of the Hebei Provincial Government on Establishing the Endowment Insurance System for Land-expropriated Farmers (HPG [2005]15)	2005.2.17
	Urgent Notice of the Hebei Provincial Labor and Social Security Department on Doing a Good Job in Social Security Review for Land-expropriated Farmers (HPLSSD [2009] No.2)	2009.3.27
	Implementation Plan of the Langfang Municipal Government for Compensation and Resettlement for Land Acquisition for the New Beijing Airport (LMG [2015] No.24)	2015.4.3
Beijing Municipality	Measures for Compensation and Resettlement for Land Acquired for Construction Purposes of Beijing Municipality (Decree No.148 of the Beijing Municipal Government)	2004.7.1
	Minimum Protective Rates of Land Acquisition Compensation of Beijing Municipality	2004.10.1

## 4.2 Key Provisions of National Laws, Regulations and Policies

### 4.2.1 Relevant Provisions of the Real Estate Law of the PRC

Article 42 For public interests, collectively owned land, and houses and other properties of organizations and individuals may be acquired according to law.

For collectively owned land acquired, land compensation, resettlement subsidy, and compensation for ground attachments and young crops shall be fully paid, and social security costs for land expropriated farmers shall be set aside to protect the lawful rights and interests of the affected farmers.

Houses and other properties of organizations and individuals acquired shall be compensated for according to law; for individual residential houses acquired, living conditions shall be provided.

### 4.2.2 Relevant Provisions of the Land Administration Law of the PRC

Article 42 Whereas land is damaged due to digging, cave-in and occupation, the units or

individuals occupying the land should be responsible for reclamation according to the relevant provisions of the State; for lack of ability of reclamation or for failure to meet the required reclamation, land reclamation fees shall be paid, for use in land reclamation. Land reclaimed shall be first used for agricultural purposes.

Article 47 For requisition of land, compensation shall be given in accordance with the original use of the requisitioned land.

Article 48 Upon determination of the scheme for compensation and resettlement for land requisition, the local people's government concerned should make an announcement and seek the views of the rural collective economic organization and farmers of the requisitioned land.

Article 49 The rural collective economic organization of the requisitioned land should publish the revenue and expenditure of the compensation fee of the requisitioned land for the members of the respective collective economic organization and accept supervision.

Article 57 Construction of a construction project and geological survey that need to temporarily use state-owned land or land collectively owned by farmers, it shall be subject to the approval of the competent department of land administration of the people's government at or above the county level. Among which, for temporary use of land within an urban planning zone, consent of the competent department of urban planning should be sought first prior to submission for approval. The land user should conclude a contract for the temporary use of the land with the competent department of land administration concerned or the rural collective economic organization and villagers' committee in accordance with the ownership of the land, and effect the payment of compensation fee for the temporary use of the land.

The duration of temporary use of land shall generally not exceed two years.

#### **4.2.3 Regulations on the Implementation of the Land Administration Law of the PRC**

Article 23 If land is to be used for a construction project, state-owned construction land within the range of the master land utilization plan must be applied for according to law. If farmland out of the range of the master land utilization plan is used for a construction project, the following provisions shall apply:

1) During the feasibility study, the administrative department for land shall examine land use, and prepare a preliminary examination report, which must be attached when the feasibility study report is submitted for approval.

2) The contractor shall file an application for construction land with the municipal or county administrative department for land, which shall draft a farmland conversion program, a farmland replenishment program, an land acquisition plan and a land supply plan. Such plans shall be submitted level by level to superior authorities after approval by the municipal or county government.

3) After the above plans are approved, they shall be implemented by the municipal or county government, and a construction land approval issued to the contractor. In case of compensated use of state-owned land, the municipal or county administrative department for land shall enter into a

compensation contract with the land user; in case of allocation of state-owned land, the municipal or county administrative department for land shall issue a state-owned allocation decision to the land user.

4) The land user shall apply for land registration according to law.

If collective unused land out of the range of the master land utilization plan is used for a construction project, only the land acquisition and land supply plans shall be submitted for approval.

Article 24 If state-owned unused land within the range of the master land utilization plan is to be occupied for a construction project, the applicable provisions of the province, autonomous region or municipality shall apply; however, land used for any national key construction project, military facility, construction project across provinces, autonomous regions or municipalities, or other construction project specified by the State Council, it shall be submitted to the State Council for approval.

Article 25 Municipal, county people's government of the locality whose land has been acquired shall, upon approval of the land acquisition plan according to law, organize its implementation, and make an announcement in the village(township), hamlet whose land has been acquired on the approval organ of the land acquisition, number of the approval document, use, scope and area of the acquired land as well as the rates for compensation of land acquisition, measures for the resettlement of agricultural personnel and duration for processing land acquisition compensation.

Persons of ownership and persons of use right of the acquired land should, within the duration prescribed in the announcement, go to the competent department of people's government designated in the announcement to go through the registration for land acquisition compensation on the strength of land ownership certificates.

The competent departments of municipal, county people's governments shall, on the basis of the approved land acquisition plan and in conjunction with the departments concerned, draw up land acquisition compensation and resettlement plan, make an announcement thereof in the village (township), hamlet wherein the acquired land is located to solicit the views of the rural collective economic organizations and peasants on the acquired land. The competent departments of land administration of municipal, county people's governments shall, upon approval of the land acquisition compensation and resettlement plan submitted to the municipal, county people's governments, organize its implementation. Where a dispute arises over the compensation rates, coordination shall be carried out by local people's government above the county level; where coordination has failed, arbitration shall be resorted to by the people's government that approved the land acquisition. Land acquisition compensation and resettlement dispute shall not affect the implementation of the land acquisition plan.

Payment of various expenses for land acquisition should be effected in full within 3 months starting from the date of approval of the land acquisition and resettlement plan.

Article 26 Land compensation fee goes to the rural collective economic organization; compensation fee for ground appendices and young crops shall be for the owner(s) of ground appendices and young crops.

Funds earmarked for land acquisition resettlement subsidy must be used for the designated purpose and shall not be diverted to any other purpose. For persons required to be resettled by the rural collective economic organization, payment of the resettlement subsidy shall be made to the rural collective economic organization to be administered and used by the rural collective economic organization; where resettlement is to be arranged by other units, the resettlement subsidy shall be paid to the resettlement units; where no unified resettlement is required, the resettlement subsidy shall be given to the individuals to be resettled or used for the payment of insurance premium for the resettled persons on gaining the consent of the resettled persons.

Municipal, county and village (township) people's governments should strengthen supervision over the use of resettlement subsidy.

#### **4.2.4 Relevant Provisions of the Decision of the State Council on Deepening the Reform and Rigidly Enforcing Land Administration**

Article 12 Improving measures of compensation for land acquisition. County-level and above local governments shall take practical measures so that the standard of living of farmers affected by land acquisition is not reduced by land acquisition. Land compensation, resettlement subsidy and compensation for ground annexes and young crops shall be paid in full and timely pursuant to law. If the land compensation and resettlement subsidy pursuant to the prevailing laws and regulations are insufficient to maintain the former standard of living of the farmers affected by land acquisition or to pay the social security expenses of farmers who lose all land due to land acquisition, the governments of provinces, autonomous regions and municipalities directly under the Central Government shall approve an increased resettlement subsidy. If the sum of the land compensation and the resettlement subsidy attains the statutory upper limit and is still insufficient to maintain the former standard of living of the farmers affected by land acquisition, local governments may pay a subsidy from the income from compensated use of state land. The governments of provinces, autonomous regions and municipalities directly under the Central Government shall fix and publish the uniform annual output value standards or integrated land prices for land acquisition of all cities and counties, so that the same price applies to the same kind of land. For key construction projects of the state, land acquisition expenses must be listed in the budgetary estimate in full. Compensation rates and resettlement measures for large and medium-sized water resources and hydropower projects shall be otherwise stipulated by the State Council.

Article 13 Resettling land-expropriated farmers properly. County-level and above local governments shall take specific measures to guarantee long-term livelihoods of farmers affected by land acquisition. For projects with a stable income, farmers may become a shareholder using the right to use of land used for construction approved pursuant to law. Within the urban planning area, local governments shall bring farmers who lose all land due to land acquisition into the urban employment system, and establish a social security system; out of the urban planning area, in acquiring land collectively owned by farmers, local governments shall reserve necessary arable land or arrange appropriate jobs for farmers affected by land acquisition within the same administrative area; farmers without land who do not have the basic living and production conditions shall be subject to non-local resettlement. The labor and social security authorities shall propose guidelines for the employment training and social security systems for farmers affected by land

acquisition as soon as possible.

Article 14 Improving land acquisition procedures. During land acquisition, the ownership of collective land of farmers and the right to contracted management of farmers' land shall be maintained. Before land acquisition is submitted for approval pursuant to law, the use, location, compensation standard and resettlement mode of the land to be acquired shall be notified to farmers affected by land acquisition; the survey results of the present situation of the land to be acquired shall be confirmed by rural collective economic organizations and farmers to be affected by land acquisition; if necessary, the land and resources authorities shall organize a hearing in accordance with the applicable provisions. The materials for notification to and confirmation by the farmers affected by land acquisition shall be taken as requisite materials for approval for land acquisition. Accelerate the establishment and improvement of the coordination and judgment mechanism for disputes over compensation and resettlement for land acquisition to protect the lawful rights and interests of farmers affected by land acquisition and land users. Approved matters of land acquisition shall be disclosed unless in special cases.

Article 15 Strengthening Supervision over the implementation of land acquisition. If the compensation and resettlement for land acquisition has not been implemented, the acquired land shall not be used forcibly. The governments of provinces, autonomous regions and municipalities directly under the Central Government shall formulate the procedures for the distribution of the land compensation within rural collective economic organizations on the principle that the land compensation is used for rural households affected by land acquisition mainly. Rural collective economic organizations affected by land acquisition shall disclose the receipt, disbursement and allocation of land compensation fees to their members and accept supervision. The agricultural and civil affairs authorities shall strengthen the supervision over the allocation and use of land compensation fees within rural collective economic organizations.

#### **4.2.5 Notice of the Ministry of Land and Resources on Doing a Better Job in Land Acquisition Management**

1) Apply uniform Average Annual Output Value (AAOV) rates and location-based land prices for land acquisition in all aspects. All localities shall establish a dynamic adjustment mechanism for compensation rates for land acquisition, adjust compensation rates for land acquisition every 2 or 3 years depending on economic level and local per capita income growth, and improve the compensation level for land acquisition gradually.

3) Distribute land acquisition compensation fees rationally. After uniform AAOV rates and location-based land prices for land acquisition are practiced, province-level land and resources departments shall establish sound measures for the distribution of land acquisition compensation fees together with the departments concerned, and submit them to province-level governments for approval provided compensation fees for land acquisition should be used mainly on land-expropriated farmers.

4) Give priority to agricultural resettlement. All localities shall adopt effective resettlement modes suited to local conditions. In rural areas where cultivated land has been added through land management or much mobile land is reserved by rural collective economic organizations, priority

shall be given to the mode of agricultural resettlement upon land acquisition, where newly added cultivated land or mobile land shall be allocated to land-expropriated farmers so that they are able to maintain basic production conditions and income sources.

6) Ensure social security funds for land-expropriated farmers are available. During land use examination and approval, all localities shall control the availability of social security funds for land-expropriated farmers.

10) Conduct notification, confirmation and hearing carefully before reporting for approval. Land acquisition concerns farmers' immediate interests, and the rights of information, participation, appeal and supervision of farmers shall be protected. Municipal and county land and resources departments shall perform the procedures carefully to listen well to farmers' opinions before reporting for approval of land acquisition in strict conformity with the pertinent provisions. Land acquisition programs shall be notified practically to village groups and farmers by such means as broadcast, village bulletin board and announcement in conjunction with village affairs disclosure. If any land-expropriated farmer has an objection and proposes a public hearing, the local land and resources department shall organize a hearing timely. Reasonable requirements proposed by farmers must be addressed properly.

#### **4.2.6 Forest Law of the PRC**

Article 18 Prospecting, mining and various construction projects shall not occupy or occupy as little as possible woodlands; in case of necessary occupancy or expropriation of woodlands, upon examination and approval of the competent forestry authorities under the people's government above the county level, the examination and approval formalities for land needed for construction shall be gone through in line with relevant land administration laws and administrative regulations; and the land-use organization shall pay forest vegetation recovery expenses in line with the relevant provisions of the State Council. The forest vegetation recovery payments shall be used for designated purposes; the competent forestry authorities shall use them, according to relevant stipulations, for forestation, recovery of forest vegetation; the area of forestation shall not be smaller than the area of forest vegetation reduced as a result of woodlands occupied or expropriated. The competent forestry authorities at a higher level shall periodically urge and inspect the competent forestry authorities at a lower level in the organization of forestation and recovery of forest vegetation.

#### **4.2.7 Regulations on the Implementation of the Forest Law of the PRC (2018 Amendment)**

Article 16 If woodland is to be occupied or acquired for investigation, mining, road construction, water conservancy, power or communication, the following provisions must be complied with:

1) The land user shall file a land use application with the forestry authority at or above the county level; after approval, it shall pay forest vegetation restoration fees, receive a woodland approval, and then apply for approval.

2) If over 10 hectares of shelter forest woodland or special purpose forest woodland is occupied or acquired, or 35 hectares of timber forest, commercial forest or firewood woodland, or over 70 hectares of other woodland is to be occupied or acquired, it shall be reviewed by the

forestry authority of the State Council; if the woodland area occupied or acquired is less than the above area, it shall be reviewed by the forestry authority of the provincial, autonomous region or municipal government.

3) If the land user is to fell trees on woodland approved for occupation or acquisition, a felling permit shall be applied for with the forestry authority of the county or above government, or the forestry authority of the State Council.

Article 17 If woodland is to be occupied temporarily, it shall be approved by the forestry authority of the county or above government.

The period of temporary occupation shall not exceed two years, and no permanent structure shall be built on such woodland; after the expiry of the occupation period, the land user must restore the occupied land.

#### **4.2.8 Regulations on the Expropriation of Houses on State-owned Land and Compensation Therefor**

Article 8 In order to protect national security, promote economic and social development and for other public interests, if houses are absolutely required to be expropriated in any of the following circumstances, decisions on house expropriation shall be made by municipal and county governments:

- 1) The needs of national defense and foreign affairs;
- 2) The needs of energy, transportation, water conservation and other infrastructure construction projects carried out under the organization of the governments;
- 3) The needs of science and technology, education, culture, health, sports, environmental and resource protection, disaster prevention and mitigation, heritage conservation, social welfare, municipal utilities and other public utility projects carried out under the organization of the governments;
- 4) The needs of construction projects for affordable residential houses carried out under the organization of the governments;
- 5) The needs of old city reconstruction projects for districts where dilapidated buildings are concentrated and poor infrastructure facilities are located that are carried out by the governments pursuant to relevant provisions of the urban and rural planning law; or
- 6) The needs of other public interests as set forth in laws and administrative regulations.

Article 13 After having made decisions on house expropriation, city and county people's governments make a public announcement thereof in a timely manner. The announcement shall specify the program for expropriation compensation, and administrative reconsideration, administrative litigation rights and other matters.

Article 14 If any the Persons Whose Houses Are to Be Expropriated have objection to the decisions on house expropriation made by the city and county people's governments, such persons

may apply for administrative reconsideration or file an administrative action according to law.

Article 15 The house expropriation departments shall organize survey and registration of the ownership, location, use, floor areas and other matters of the houses in the scope of house expropriation, and the Persons Whose Houses Are to Be Expropriated shall cooperate. The survey results shall be disclosed to the Persons Whose Houses Are to Be Expropriated within the scope of house expropriation.

Article 16 After the scope of house expropriation has been determined, no new construction, expansion or reconstruction of houses within the scope of house expropriation may be carried out, and the purposes of the houses may not be altered, and any other acts aimed at receiving more compensation may not be carried out. If such acts are carried out in violation of the regulations, no compensation shall be paid.

Article 17 The compensation to be paid by the city and county people's governments that have made the decisions on house expropriation to the Persons Whose Houses Are to Be Expropriated shall include:

- 1) The compensation for the value of the houses to be expropriated;
- 2) The compensation for relocation and temporary resettlement arising from the house expropriation; and
- 3) The compensation for losses arising from production and business suspension caused by the house expropriation.

City and county people's governments shall formulate the procedures for subsidies and incentives, and grant subsidies and incentives to the Persons Whose Houses Are to Be Expropriated.

Article 19 The compensation for the value of the expropriated house shall not be lower than the market price of a similar property on the date of announcement of the expropriation decision. The value of the expropriated house shall be appraised by a qualified agency.

Article 27 In carrying out house expropriation, compensation shall be paid first before relocation.

#### **4.2.9 Regulations on the Protection of Oil and Gas Pipelines**

Article 15 No organization or individual shall deal with the following activities that endanger pipeline safety: 1) moving, dismantling or damaging marks and signs for protecting pipeline safety; 2) excavating earth, building a canal or fish farm, discharging any corrosive substance, stacking any bulk material, or cultivating any deep-rooted plant within 5m on both sides of the pipeline; 3) conducting explosion or mountain cutting, or building any large structure within 50m on both sides of the pipeline or out of the site; 4) driving a motor vehicle above the pipeline, or walking on any ground or overhead pipeline; and 5) doing other acts that endanger pipeline safety.



#### 4.2.10 Farmland Occupation Tax Law of the PRC

Article 2 Any organization or individual occupying farmland for construction or nonagricultural operations within the PRC shall be a payer of farmland occupation tax.

Article 4 The amount of farmland occupation tax shall be as follows:

- 1) Regions where per capita cultivated area is not more than 1 mu: 10-50 yuan/m<sup>2</sup>;
- 2) Regions where per capita cultivated area is more than 1 mu but less than 2 mu: 8-40 yuan/m<sup>2</sup>;
- 3) Regions where per capita cultivated area is more than 2 mu but less than 3 mu: 6-30 yuan/m<sup>2</sup>;
- 4) Regions where per capita cultivated area is more than 3 mu: 5-25 yuan/m<sup>2</sup>.

Article 12 If garden land, woodland, grassland, irrigation land, aquaculture surface or other farmland is used for construction or nonagricultural operations, farmland occupation tax shall be paid in accordance with the provisions of this law.

### 4.3 Local Regulations and Policies

#### 4.3.1 Notice of the Tianjin Municipal Government on Adjusting Location-based Prices for Acquired Land of Tianjin Municipality

1. The adjusted location-based prices for acquired land shall include land compensation and a resettlement subsidy, and must be followed strictly without adjustment.
2. Social security costs for land loss farmers, and compensation for ground attachments, structures and young crops shall be otherwise paid by the land user.

The Project involves 5 areas in Tianjin namely BH6, XQ4, WQ2, JH2 and JH3. See Table 4-2.

**Table 4-2 Location-based Prices for Acquired Land of Tianjin Municipality**

District / county	Number of areas	No.	Price (10,000 yuan/mu)
Binhai New District	6	BH1	8.8
		BH2	7.5
		BH3	6.4
		BH4	4.9
		BH5	4.4
		BH6	4
Xiqing District	4	XQ1	25.6
		XQ2	18.2

		XQ3	12.8
		XQ4	8.3
Wuqing District	2	WQ1	3.7
		WQ2	2.9
Jinghai District	3	JH1	4.3
		JH2	3.4
		JH3	2.8

#### 4.3.2 Notice of the General Office of the Tianjin Municipal Government on Further Strengthening Land Acquisition Management

2. Perform the land acquisition procedure normally. Before land acquisition approval, the district land and resources bureau shall perform the notification, confirmation and public hearing procedure strictly, notify the purpose, location, compensation rate and resettlement mode of the land to be acquired to the affected rural collective economic organization and households, and investigate the ownership, type and area of the land to be acquired, and the ownership, types and quantities of ground attachments. The affected rural collective economic organization and households have the right to apply for public hearing for the compensation rate and resettlement mode. After land acquisition approval, the district land and resources bureau shall conduct LA announcement and registration properly to disclose land acquisition information comprehensively, timely and accurately.

4. Comply strictly with the location-based prices for acquired land. The district government shall conduct LA compensation in strict conformity with the Location-based Prices for Acquired Land of Tianjin Municipality. If any prevailing compensation rate cannot maintain the existing living standard of the land loss farmers, the district government may grant a subsidy from the compensation for the use state-owned land.

5. Practice a compensation deposition system. Before land acquisition approval, the land user shall deposit land compensation and resettlement subsidy fully into the special account, and pay compensation for ground attachments and young crops to their proprietors. After land acquisition approval, the deposited land compensation and resettlement subsidy shall be accounted for timely. The municipal land and resources bureau shall supervise the deposition of land compensation and resettlement subsidy.

6. Resettle land loss farmers in multiple ways. The district government shall explore multiple resettlement modes for land loss farmers, such as employment, land reservation and equity participation, in order to ensure their long-term livelihoods.

7. Implement the endowment insurance policy for land loss farmers. Before land acquisition approval, the land user shall pay endowment insurance premiums for land loss farmers in addition to land acquisition compensation, and deposit such premiums to the special account before land acquisition approval.

9. Establish a land acquisition implementation coordination mechanism. The district land and resources bureau is responsible for implementing the land acquisition procedure, reviewing and disbursing compensation, and drafting the compensation and resettlement program together with the township government; the district labor and social security bureau is responsible for implementing the social security policy for land loss farmers; the district agricultural bureau is responsible for supervising the distribution and use of compensation within the rural collective economic organization; other departments concerned shall support land acquisition implementation.

#### **4.3.3 Interim Measures for Social Security for Land-Loss Farmers of Tianjin Municipality (TMG [2004] No.112)**

Article 2 These measures apply to local registered rural residents having attained 16 years and affected by land acquisition (hereinafter referred to land loss farmers).

Article 4 Land loss farmers shall be covered by social security in a unified manner. The number of insured land loss farmers shall be the acquired cultivated area divided by the per capita cultivated area before LA.

Article 5 A social security fund for land loss farmers shall be established and managed in a unified, and from LA compensation and government subsidies.

#### **4.3.4 Measures for the Implementation of Basic Endowment Insurance for Urban and Rural Residents of Tianjin Municipality**

Article 24 Land loss farmers with local registered residence, having attained 16 years, and whose land is acquired according to law shall cover endowment insurance for urban and rural residents.

Article 25 The number of land loss farmers shall be based on the acquired cultivated area and the per capita cultivated area.

Article 26 For a land loss farmer, premiums shall be paid by the land user for 15 years at a time at 40%, 35% or 30% of the per capita disposable income of rural residents of the city in the previous year.

Article 27 Premiums paid for a land loss farmer shall be included in the individual account.

Article 28 Establish a premium deposition system. Before land acquisition approval, the land user shall deposit premiums into the special account of the municipal finance bureau.

#### **4.3.5 Notice on Levels of Contribution to Basic Endowment Insurance Premiums for Urban and Rural Residents by Land-expropriated Farmers**

According to the Measures for the Implementation of Basic Endowment Insurance for Urban and Rural Residents of Tianjin Municipality (TMG [2014] No.19), from January 1, 2018, for a land loss farmer covering basic endowment insurance for urban and rural residents, premiums shall be paid by the land user for 15 years at a time in addition to location-based prices for acquired land at one of the 3 contribution levels, namely 8,030 yuan, 7,027 yuan and 6,023 yuan per annum.

### 4.3.6 Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality

In order to regulate compensation for ground attachments and young crops on acquired land, the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality were promulgated in February 2014.

#### 1) Non-residential properties and attachments

The compensation rates for non-residential properties and attachments affected by the Project specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality are shown in Table 4-3.

**Table 4-3 Compensation Rates for Non-residential Properties and Attachments**

No.	Type	Item	Unit	Compensation rate (yuan/unit)
1	Non-residential property	Simple	m <sup>2</sup>	420
2	Greenhouse	Steel frame plastic greenhouses	m <sup>2</sup>	65
		Ordinary plastic greenhouses	m <sup>2</sup>	35
3	Tomb	Single coffin		3000

#### 2) Power facilities

The compensation rates for power facilities affected by the Project specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality are shown in Table 4-4.

**Table 4-4 Compensation Rates for Power Facilities**

No.	Type	Item	Specification	Compensation rate (yuan/unit)
5	Telegraph poles	Cement	Wired 8-10m	2700-2900
			Wireless 8-10m	700-900
		Wooden	Wired 6-7m	2400-2650
			Wireless 6-7m	500-700

#### 3) Seedlings

The compensation rates for seedlings affected by the Project specified in the Compensation

Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality are shown in Table 4-5.

**Table 4-5 Compensation Rates for Seedlings**

Item	Diameter	Compensation rate (yuan/unit)
Poplar	Diameter <5cm	20-35
	5cm=< diameter <11cm	35-100
	11cm=< diameter <20cm	100-650
Willow	Diameter <5cm	30-45
	5cm=< diameter <11cm	45-220
	11cm=< diameter <20cm	220-600
Locust tree	Diameter <5cm	55-85
	5cm=< diameter <11cm	85-400
	11cm=< diameter <20cm	400-1500

#### 4) Fruit trees

The compensation rates for fruit trees affected by the Project specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality are shown in Table 4-6.

**Table 4-6 Compensation Rates for Fruit Trees**

Item	Growth stage	Compensation rate (yuan/unit)
Apple, peach, plum	Full fruit	750-1100
	Early fruit	375-550
	Young fruit	150-220
	Sapling	25-50
Chestnut, walnut	Full fruit	1200-1900
	Early fruit	600-950
	Young fruit	240-380
	Sapling	25-50

Grape	Full fruit	150-250
	Early fruit	75-125
	Young fruit	30-50
	Sapling	15-25

## 5) Crops

The compensation rates for young crops affected by the Project specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality are shown in Table 4-7.

**Table 4-7 Compensation Rates for Young Crops and Vegetables**

Type		Item	Unit	Compensation rate (yuan/unit)
Food crops		Wheat	mu	1350
		Corn, beans	mu	1250
		Paddy rice	mu	1550
Facility vegetables	Ordinary greenhouses	Solanaceous vegetables (pepper, eggplant, melons, tomato, etc.)	mu	10100
		Leaf vegetables (cabbage, lettuce, celery, spinach, rape, crown daisy, etc.)	mu	7650
		Beans (cowpea, kidney bean, snow pea, etc.)	mu	7300

### 4.3.7 Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land

The compensation for acquired collective land shall be the location-based price multiplied by the acquired land area. No organization or individual shall raise or lower the compensation rate without authorization. The land compensation shall be 16 times the average annual output value of cultivated land of the township in the past 3 years. If the land compensation cannot maintain the living standard and should be raised, it shall be approved by the competent authority.

20% of the land compensation shall belong to the collective economic organization, and 80% to the holder of the land use right or contracting household; if the acquired land has no holder of the land use right and is not contracted, 100% the land compensation shall belong to the collective economic organization for distribution or use according to law. The land compensation shall be disbursed timely and fully.

Attachments and young crops on the acquired land shall be otherwise compensated for.

Before the approval of farmland acquisition, the municipal / county government shall fix social security costs for land loss farmers at not less than 10% of the location-based price, and such costs shall be transferred to the special account and used specifically for social security for land loss farmers.

#### **4.3.8 Notice of the Hebei Provincial Government on Revising Location-based Prices for Acquired Land (2015)**

LA for the Project involves 4 areas in Anci District, Guangyang District and Yongqing County, Langfang City, Hebei, which are Areas 1 and 2 of Anci District, Area 1 of Guangyang District and Area 2 of Yongqing County. The location-based prices for acquired land of these 4 areas specified in the Notice of the Hebei Provincial Government on Revising Location-based Prices for Acquired Land are shown in Table 4-8.

**Table 4-8 Location-based prices for acquired land of Hebei Province (unit: yuan/mu)**

Division	Average price	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Langfang City	86428								
Anci District	84760	99000	74000						
Guangyang District	115000	115000							
Yongqing County	85046	100000	79000						

#### **4.3.9 Measures of Hebei Province for the Implementation of the Forest Law of the PRC (2018 Amendment)**

Article 11 Woodland occupation shall be minimized for construction purposes. If woodland occupation or acquisition is inevitable, the land user shall go through the review procedure, and pay forest vegetation restoration fees.

Article 12 For woodland occupied or acquired with approval, the woodland compensation and resettlement subsidy payable shall be based on the Land Administration Regulations of Hebei Province, and the forest compensation rate shall be fixed by the provincial forestry bureau.

Article 13 If woodland is to be occupied temporarily for construction purposes, the land user shall enter into a temporary occupation agreement with the owner or user of the woodland.

After the expiry of the occupation period, the land user shall return the woodland on schedule. If the forest vegetation is damaged, the land user shall restore the forest vegetation, or pay forest vegetation restoration fees to the forestry authority approving woodland occupation.

#### **4.3.10 Opinions of the Hebei Provincial Government on Establishing the Endowment Insurance System for Land-expropriated Farmers**

1. Insured

1) Farmers affected by land acquisition by the local land and resources bureau, enjoying the

land contracting right, and whose per capita cultivated area is insufficient to maintain basic living after LA shall be included in endowment insurance for land loss farmers.

2) Men having attained 60 years and women having attained 55 years at the time of land acquisition shall be insured directly and receive a pension monthly after paying premiums at a time.

3) Men having not attained 60 years and women having not attained 55 years at the time of LA shall pay premiums at a time or year by year, and receive a pension monthly after attaining 60 years for men or 55 years for women.

4) If a land loss farmer has not attained the statutory working age, the resettlement subsidy shall be paid at a time.

## 2. Fundraising

1) The endowment insurance fund for land loss farmers shall be borne by the individual, collective and government, not less than 30%, 40% and 30% respectively.

### **4.3.11 Minimum Protection Standard of Compensation Fees for Land Expropriation in Beijing**

1. The minimum protection standard of land expropriation compensation fee includes land compensation fee and resettlement subsidy.

2. The minimum protection standard of land expropriation compensation fee refers to the minimum compensation fee for land expropriation in the expropriated towns. The specific land expropriation compensation fees for land expropriation projects shall be based on the land expropriation compensation and resettlement agreement signed by the land expropriation unit and the expropriated rural collective economic organization through consultation.

### **4.3.12 Minimum Protective Rates of Land Acquisition Compensation of Beijing Municipality**

1. The minimum protective land acquisition compensation rate shall include land compensation and resettlement subsidy.

2. The minimum protective land acquisition compensation rate shall mean the minimum rate for rural land acquisition compensation. The specific land acquisition compensation rate of a project involving land acquisition shall be based on the land acquisition compensation agreement between the land acquirer and the affected rural collective economic organization.

### **4.3.13 Measures for Compensation and Resettlement for Land Acquired for Construction Purposes of Beijing Municipality**

Article 8 The land acquisition compensation paid by the land acquirer shall include land compensation and resettlement subsidy. If young crops and other ground attachments are involved, compensation shall also be paid to their proprietors.

Article 10 The land acquirer and the affect rural collective economic organization shall enter into



a written land acquisition compensation agreement, specifying the mode and amount of compensation, mode of payment, population resettled, mode of resettlement, compensation for young crops and ground attachments, liabilities for breach, dispute settlement, etc.

Article 16 Young crops shall be compensated for at the output value of one harvest, but those of perennial crops at the output value of one year.

Article 18 In case of illegal construction or land occupation, the attachments on the land shall not be compensated for. New young crops, commercial crops, trees, etc. newly planted within the land acquisition range after the land acquisition announcement shall not be compensated for.

Article 19 For collective land acquired, the relevant villagers shall be converted into urban status. The number of villagers converted shall be the acquired cultivated area divided by the per capita cultivated area before land acquisition.

Article 33 From the month of land acquisition approval, laborers converted into urban status shall cover social insurance in accordance with the state and municipal provisions.

The rural collective economic organization or village committee shall go through the social insurance procedure and pay the premium for a laborer converted into urban status within 30 days.

#### **4.4 AIIB Policy: Environment and Social Framework**

In February 2016, AIIB issued the ESF to integrate environmental protection and sustainable development into the whole process of project screening, preparation and implementation, and realize the coordinated development of economy, society, environment and resources.

The ESF include environmental and social policies, ESSs (Standard 1: Environmental and Social Assessment and Management; Standard 2: Involuntary Resettlement; Standard 3: Indigenous Peoples), and environmental and social exclusion lists.

- Reflect the organizational objectives to address environmental and social risks and impacts in the project, and ensure the environmental and social soundness and sustainability of the project.

- Support the inclusion of the project's environmental and social aspects in the decision-making process.

- Provide a mechanism for addressing environmental and social risks and impacts in Project identification, preparation and implementation

- Provide a framework for public consultation and disclosure of environmental and social information in relation to the Project

- Improve development effectiveness and impact to increase results on the ground, both short and long term

##### **Key points and requirements on resettlement in the ESF:**

1. Involuntary resettlement: The involuntary resettlement should be avoided, and if it is not

feasible to avoid involuntary resettlement, it has to ensure that the resettlement activities are conceived and executed as sustainable development programs providing sufficient resources to enable the displaced persons to share in project benefits.

2. Involuntary resettlement: including involuntary resettlement in the near or foreseeable future directly related to the project, including physical displacement (relocation or loss of shelter) and economic displacement (lost of assets or access to assets, income sources or means of livelihood), as a result of: (a) the involuntary taking of land; or (b) the involuntary restriction of access to legally designated parks and protected areas.

3. Social survey: Determine the range of the involuntary resettlement through a survey of land and assets, a general survey of displaced persons, and an assessment of socioeconomic conditions related to risks and impacts of involuntary resettlement.

4. Resettlement Action Plan (RAP) or Resettlement Planning Framework (RPF): If the project involves involuntary resettlement, the project proponent has to prepare a RAP or RPF, subject to the extent and degree of the impacts. The degree of impacts is determined by the physical and economic displacement and vulnerability of the affected people. The RAP or RPF will cover social risks and impacts and provides specialized guidance to address the specific issues associated with involuntary resettlement, including land acquisition, changes in land use rights, displacement and need for livelihood restoration.

5. Non-titled affected persons: AIIB requires the Client to ensure that displaced persons without title to land or any recognizable legal rights to land, are eligible for and receive resettlement assistance and compensation for loss of non-land assets, in accordance with cut-off dates established in the resettlement plan, and that they are included in the resettlement consultation process.

6. Indigenous peoples: AIIB seeks the technical judgment of qualified social scientists for project impacts on indigenous peoples, on customary use or rights of use and access to land and natural resources, socioeconomic status, cultural and communal integrity and heritage, health, education, livelihood systems and social security status and indigenous knowledge and vulnerability of affected indigenous peoples. If the project would have impacts on Indigenous Peoples, an Indigenous Peoples Plan (IPP) or Indigenous Peoples Policy Framework (IPPF) have to be prepared on the coverage of social risks and impacts on the indigenous peoples and provides specialized guidance to address specific issues associated with the need of the affected Indigenous Peoples.

7. Information Disclosure: The relevant information about social risks and impacts of the Project have to made available in the Project area in a timely and accessible manner, and in form and language(s) understandable to the project affected people, other stakeholders and the general public, so they can provide meaningful inputs into the design and implementation of the project.

8. Consultation: Meaningful consultations with the stakeholders during the Project's preparation and implementation phases, have to be held, which will cover Project design, mitigation and monitoring measures, sharing development benefits and opportunities and implementation

issues of the project.

9. **Grievance Redress Mechanism:** A suitable grievance mechanism, which may include formal or informal existing mechanism, will be designed to address affected peoples' concerns and complaints promptly, using an understandable and transparent process that is gender-sensitive, culturally appropriate and readily accessible to all affected people.

10. **Monitoring:** The resettlement results will be compared with the baseline data to learn the impacts on the APs' living standard and if the objectives of the RAP have been realized. The monitoring plan will be implemented by an appropriately qualified and experienced third party.

#### **4.5 Gap Analysis between the AIIB Policy, and PRC Laws and Policies, and Remedies**

The PRC laws and policies mainly include provisions on compensation for acquired rural collective land, and houses on state-owned and collective land, resettlement of the affected people, the land and house acquisition procedure, etc. The main differences between AIIB's ESF, and the applicable PRC policies are as follows:

1) The PRC laws and policies lack Identification and special assistance for the poor and vulnerable groups

The PRC laws and policies on land acquisition compensation and resettlement do not address the issue of identification of poor population and vulnerable groups specifically, and do not specify assistance for them. Under the AIIB policy, vulnerable groups will receive necessary assistance during compensation and resettlement.

According to the government's definition, those who are not regarded as vulnerable groups (usually including five-guarantee persons and minimum living security households, where five-guarantee persons refer to old, disabled and underage rural residents with no ability to work, no income source and no statutory supporter, and minimum living security households refer to households with per capita monthly income below the specified level, and receiving the minimum living security benefit from the local government) but may become distressed or can hardly overcome difficulties due to land acquisition and house demolition, such as needing labor, transport and other special assistance during relocation, will also be identified as vulnerable groups and provided with necessary assistance.

According to the government's definition, those who are not regarded as vulnerable groups (usually including five-guarantee persons and minimum living security households, where five-guarantee persons refer to old, disabled and underage rural residents with no ability to work, no income source and no statutory supporter, and minimum living security households refer to households with per capita monthly income below the specified level, and receiving the minimum living security benefit from the local government) but may become distressed or can hardly overcome difficulties due to land acquisition and house demolition, such as needing labor, transport and other special assistance during relocation, will also be identified as vulnerable groups and provided with necessary assistance.

Some minority residents, old persons and members of families without male labor who do not conform to the government's definition should also be further identified in vulnerability during the detailed measurement survey

In the Project, no vulnerable group has been identified yet, but this will be further confirmed during RAP updating.

2) The PRC laws and policies lack provisions on consultation, information disclosure and grievance redress.

Public participation and consultation, and information disclosure activities during RAP preparation have been included in the RAP, and will be further recorded during RAP updating and project implementation. Grievance redress records will also be part of M&E reports. Key information in the RAP will be disclosed via RIB distribution.

3) The PRC laws and policies are inadequate in social impact and risk analysis, and lay more stress on compensation for land acquisition and house demolition losses.

During RAP preparation, a project impact assessment was conducted by means of socioeconomic survey, consulting meeting, detailed measurement, key informant interview and social gender analysis. On the basis of these measures, the entitlement matrix, resettlement programs and a gender strategy have been proposed, and included in the RAP.

4) Assistance for households not eligible for house compensation at replacement cost

According to the Regulations on House Acquisition on State-owned Land and Compensation, illegal properties or temporary properties built after the land acquisition and house demolition announcement will not be compensated for.

According to the AIIB policy, non-land assets before the cut-off date will be compensated for at replacement cost, and the resettlement assistance received by the AP will be the same as the scenario with a title certificate. For any household that cannot receive compensation at replacement cost for any historical reason, its socioeconomic status and vulnerability will be evaluated, and it will be provided with assistance if appropriate to ensure that its living standard is restored or will not deteriorate.

**The Project does not involve the demolition of illegal properties.**

5) The PRC laws and policies lack provisions on RAP implementation monitoring and reporting.

The owner will conduct internal monitoring and submit reports regularly. External monitoring will be conducted by an independent third party; all external monitoring reports will be disclosed publicly, and all monitoring reports submitted to AIIB.

#### **4.6 Compensation Rates of the Project**

The compensation rates of the Project mainly include land acquisition compensation rates,

compensation rates for temporary land occupation, permanent compensation rates for temporary land occupation, and compensation rates for ground attachments.

#### 4.6.1 Compensation Rates for Permanent Land Acquisition

In the Project, the Daqiu Zhuang distribution station, Jinghai relay station, Yongqing relay station, Anci distribution station, final station, and the 2#, 3#, 4#, 5#, 6#, 7#, 8#, 9# and 10# valve houses involve permanent LA. These stations and valve houses are located in Jinghai, Xiqing and Wuqing Districts, Tianjin Municipality, and Yongqing County, Anci District and Guangyang District, Langfang City, Hebei Province, and the final station in Daxing District, Beijing Municipality. The land acquisition compensation rates in Tianjin and Hebei are location-based prices for acquired land; the land acquisition compensation rates in Beijing are minimum protective rates, which are minimum rates in the affected townships, and adjusted by the municipal land and resources bureau dynamically. See Table 4-9.

**Table 4-9 LA Compensation Rates**

Item	Administrative division				Compensation rate (10000)
	Municipality	Township	Township	Village	
2# valve house	Tianjin	Binhai New District	Zhongtang Town	Changliuzhuang	4
Daqiu Zhuang distribution station	Tianjin	Jinghai District	Daqiu Zhuang Town	Dongshang Dock Guankeng	3.4
Jinghai relay station	Tianjin	Jinghai District	Zhaizhuang Town	Hexin	2.8
3# valve house	Tianjin	Jinghai District	Chenguantun Town	Tancun	2.8
4# valve house	Tianjin	Jinghai District	Duliu Town	Liujiaying	2.8
5# valve house	Tianjin	Xiqing District	Xinkou Town	Xiaxinkou	8.3
6# valve house	Tianjin	Wuqing District	Wangqingtu Town	Yijie	2.9
7# valve house	Langfang	Anci District	Donggugang Town	Donggugangsi	7.4
8# valve house	Langfang	Anci District	Geyucheng Town	Nandi	7.4
Anci distribution	Langfang	Anci District	Yangshuiwu Xiang	Xiaocixiang	9.9
Yongqing relay station	Langfang	Yongqing County	Bieguzhuang Town	Nanrenying	7.9
		Anci District	Diaohetou Xiang	Zhongmazhuang	7.4
9# valve house	Langfang	Yongqing County	Bieguzhuang Town	Jiaozhuang	7.9
10# valve house	Langfang	Guangyang District	Jiuzhou Town	Fashang	11.5
final station	Beijing	Daxing District	Lixian Town	Dianzi	30

#### 4.6.2 Compensation Rates for Temporary Land Occupation

There is no compensation rate for temporary land occupation in the project area. The minimum compensation rate for temporary land occupation in Tianjin and Hebei has been fixed at about 2,000 yuan/mu (excluding crop compensation), and that in Daxing District, Beijing about 4,000 yuan/mu (excluding crop compensation), as shown in Table 4-10.

**Table 4-10 Compensation Rates for Temporary Land Occupation**

Administrative division		Compensation rate (yuan/mu)
Province / municipality	District / county	
Tiajin	Binhai New, Jinghai, Wuqing and Xiqing Districts	2000
Hebei	Anci District, Yongqing County, Guangyang District	2000
Beijing	Daxing	4000

#### 4.6.3 Permanent Compensation Rates for Temporary Land Occupation

According to the Regulations on the Protection of Oil and Gas Pipelines, no deep-rooted plant should be grown within 5m on both sides of the pipeline. Due to this restriction, for oil and gas pipeline projects in the project area, land occupied temporarily within 5m on both sides will be compensated for permanently. Such compensation rate in Tianjin and Hebei is 24,000 yuan/mu, and that in Daxing District, Beijing 60,000 yuan/mu.

#### 4.6.4 Compensation Rates for Ground Attachments

Ground attachments mainly include non-residential properties, seedlings, fruit trees, greenhouses, tombs and telegraph poles. Since there are no uniform compensation rates for houses and ground attachments in Hebei, the compensation rates for ground attachments under the Project will be based on the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality, and will be finally subject to compensation agreements with affected villages and households.

##### 1) Non-residential properties and attachments

The non-residential properties affected by the Project are mainly simple abandoned workshops, and the replacement cost is 420 yuan/m<sup>2</sup>.

##### 2) Seedlings

The seedlings affected by the Project are poplars, willows and locust trees mainly, including small seedlings (diameter <5cm), medium seedlings (5-11cm) and large seedlings (11-20cm). The compensation rates under the Project are medians of the corresponding ranges specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality. See Table 4-11.

**Table 4-11 Compensation Rates for Seedlings**

Item	Diameter	Former	Compensation rate under the
Poplar	Diameter <5cm	20-35	27.5
	5cm=< diameter <11cm	35-100	67.5
	11cm=< diameter <20cm	100-650	375

Willow	Diameter <5cm	30-45	37.5
	5cm=< diameter <11cm	45-220	132.5
	11cm=< diameter <20cm	220-600	410
Locust tree	Diameter <5cm	55-85	70
	5cm=< diameter <11cm	85-400	242.5
	11cm=< diameter <20cm	400-1500	950

### 3) Fruit trees

The fruit trees affected by the Project are apple, peach, plum and grape trees mainly, and divided into full fruit, early fruit, young fruit and sapling. The compensation rates under the Project are medians of the corresponding ranges specified in the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality. See Table 4-12.

**Table 4-12 Compensation Rates for Fruit Trees**

Item	Growth stage	Former rate	Compensation rate under the Project (yuan)
Apple, peach, plum	Full fruit	750-1100	925
	Early fruit	375-550	462.5
	Young fruit	150-220	185
	Sapling	25-50	37.5
Grape	Full fruit	150-250	200
	Early fruit	75-125	100
	Young fruit	30-50	40
	Sapling	15-25	17.5

### 5) Greenhouses

The greenhouses affected by the Project are steel structure plastic greenhouses mainly, and the compensation rate is 65 yuan/m<sup>2</sup> according to the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality.

### 6) Tombs

The tomb compensation rate of the Tianjin and Hebei project areas are based on the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality, namely 3,000 yuan per single-coffin tomb, to be increased by 2,000 yuan per coffin; the tomb compensation rate of the Beijing project area is 12,000 yuan each.

### 7) Telegraph poles

The telegraphs affected by the Project are mainly wired 8-10m cement poles, and the compensation rate is 2,800 yuan each according to the Compensation Rates for Ground

Attachments and Young Crops on Acquired Land of Tianjin Municipality.

#### 4.6.5 Compensation Rates for Young Crops

The young crops affected by the Project mainly include corn, Solanaceous vegetables and leaf vegetables, and the compensation rates are based on the Compensation Rates for Ground Attachments and Young Crops on Acquired Land of Tianjin Municipality. See Table 4-13.

**Table 4-13 Compensation Rates for Young Crops**

Type	Item	Unit	Compensation rate (yuan/mu)
Food crops	Corn	mu	1250
Ordinary greenhouses	Solanaceous vegetables (pepper, eggplant, melons, tomato, etc.)	mu	10100
	Leaf vegetables (cabbage, lettuce, celery, spinach, etc.)	mu	7650

An entitlement matrix is presented in Annex (Chapter 12), and all compensation rates are based on replacement cost..



## 5. Resettlement Programme and Social Security

### 5.1 Principles of Resettlement

1) The RAP should be based on the socioeconomic survey and DMS on the project area, the state and local regulations and policies on LA compensation, and AIIB's ESF.

2) The project design should be optimized to minimize permanent LA and temporary land occupation Project Area, and measures should be taken during construction to reduce impacts.

3) The acquired land and resulting losses should be compensated for reasonably. The LA compensation should be fully paid within 3 months after the approval of the LA compensation and resettlement program.

4) The APs should receive full compensation for lost assets before land handover, and their living standard, productivity and income level should be restored to the pre-LA levels or higher after LA.

5) Anyone who occupies land or builds a house in the project area after the cut-off date should not be subject to compensation and resettlement.

6) The APs should be encouraged to participate during RAP preparation and implementation, consulted meaningfully, notified of their rights and resettlement options, and involved in resettlement planning, implementation and M&E. Attention should be paid to needs of vulnerable groups, especially those under the poverty line, land losers, old people, women, children, indigenous peoples.

7) It should be ensured that APs without title to land or any recognizable legal rights to land, are eligible for and receive resettlement assistance and compensation for loss of non-land assets.

8) Attention should be paid to the APs' grievances and appeals, and they should be assisted in overcoming difficulties in LA compensation timely and reasonably.

9) Before the Project is approved, the draft RAP should be disclosed to the APs and other stakeholders at a suitable location, and in the language and mode understood by the APs timely. The final RAP and its updated versions shall be disclosed to the APs and other stakeholders.

10) Any major change during RAP implementation (reducing any compensation rate, changing the location or size of LA or HD, adding a component, or funding a component with domestic funds, etc.) should be reported to AIIB in advance. The RAP may be revised or a separate RAP prepared if necessary.

11) The IA should conduct internal monitoring on LA compensation and resettlement during project implementation, and appoint a qualified and experienced third party to conduct external M&E and submit M&E reports to AIIB regularly.

12) The resettlement outcome should be monitored and evaluated through AIIB and the IA, and its impact on the APs' living standard examined to see if the RAP is implemented as expected.

## 5.2 Resettlement

Resettlement mainly involves compensation, the availability of production conditions, and income restoration to provide sustainable livelihood support.

Among the Tianjin, Hebei and Beijing areas, there is no population affected by LA in the Beijing area, and Tianjin and Hebei differ in LA compensation and LEF resettlement policies. Therefore, the population affected by permanent LA will be resettled in each province / municipality, and the population affected by temporary land occupation will be resettled through consultation.

### 5.2.1 Income Restoration and Resettlement of the Population Affected by LA in the Tianjin Project Area

The Daqiuzhuang distribution station, Jinghai relay station, and 2, 3, 4, 5 and 6# valve houses will be constructed in the Tianjin segment of the Project, involving the permanent acquisition of 44.29 mu of collective land in 8 villages, affecting 25 households with 84 persons in 7 villages and no one in one village. The main income restoration measures for the population affected by permanent LA in Tianjin are cash compensation and social security.

#### 1) Cash compensation

According to the relevant documents and practices, 20% of the land compensation shall belong to the collective economic organization, and 80% to the holder of the land use right or contracting household. Since the Daqiuzhuang distribution station, Jinghai relay station and 5 valve houses have small LA areas, the income restoration measure is cash compensation.

According to the Notice of the Tianjin Municipal Government on Adjusting Location-based Prices for Acquired Land of Tianjin Municipality, the adjusted location-based prices for acquired land shall include land compensation and a resettlement subsidy, and must be followed strictly without adjustment. The compensation rates of the Project are as follows: Changliuzhuang Village, Zhongtang Town, Binhai New District—40,000 yuan/mu; Guankeng and Dongshang Dock Villages, Daqiuzhuang Town, Jinghai District—34,000 yuan/mu; Hexin Village in Xizhaizhuang Town, Liujiaying Village in Duliu Town and Tancun Village in Chenguantun Town—28,000 yuan/mu; Xiaxinkou Village, Xinkou Town, Xiqing District—83,000 yuan/mu; Wangqingtuo Town, Wuqing District—29,000 yuan/mu. All compensation rates are at Replacement Cost.

44.29 mu of land will be acquired in the Tianjin segment, including 7.75 mu of irrigation and road land, and 36.54 mu of cultivated land and woodland. The LA compensation is 1.4888 million yuan, in which 994,500 yuan will be paid to the AHs and 494,300 yuan withheld by collectives. See Table 5-1.

**Table 5-1 LA Compensation Distribution in Affected Villages in Tianjin**

District	Town	Village	Compensation rate (0,000)	LA area (mu)		Compensation (0,000)	Paid to AH (0,000)	Withheld by collective (0,000 yuan)
				Total	Road and irrigation			
Wuqing	Wangqingtu	Yijie	2.9	1.63	0.11	4.73	3.53	1.20
Xiqing	Xinkou	Xiayinkou	8.3	2.53		21.0	16.80	4.20
Binhai New	Zhongtang	Changliuzhuang	4	2.53	0.66	10.12	5.98	4.14
Jinghai	Daqiuizhuang	Dongshang Dock	3.4	12.74	3.25	43.2	25.81	17.50
	Daqiuizhuang	Guankeng	3.4	0.19	0.19	0.65	0.00	0.65
	Xizhaizhuang	Hexin	2.8	20.58	2.8	57.62	39.83	17.80
	Duliu	Liujiaying	2.8	2.53	0.47	7.08	4.61	2.47
	Chengquantun	Tancun	2.8	1.56	0.27	4.37	2.89	1.48
<b>Total</b>				<b>44.29</b>	<b>7.75</b>	<b>148.88</b>	99.45	49.43

The AHs in the Tianjin segment will lose 1.46 mu of land on average, 0.44 mu per capita. The acquired land is mostly used for corn cultivation, with net income of about 800 yuan/mu, so the per capita annual income loss is 352 yuan/mu. The per capita land compensation will be 11,800 yuan. If this sum is deposited in the bank, the annual interest will be 389 yuan (3-year time deposit rate 3.3%), higher than the annual income loss. Of course, depositing the compensation in the bank is only one of the risk-free income restoration measures, but it can be seen that the compensation is largely sufficient for income restoration.

**Table 5-2 Per Capita LA Compensation of LEFs in Tianjin**

District	Town	Village	LA area (mu)	Affected by LA		Per capita land loss (mu)	Per capita compensation (0,000 yuan)
				HHs	Population		
Wuqing	Wangqingtu	Yijie	1.52	2	8	0.19	0.44
Xiqing	Xinkou	Xiayinkou	2.53	3	11	0.23	1.53
Binhai New	Zhongtang	Changliuzhuang	1.87	3	10	0.19	0.6
Jinghai	Daqiuizhuang	Dongshang Dock	9.49	5	18	0.53	1.43
	Daqiuizhuang	Guankeng	0			0	
	Xizhaizhuang	Hexin	17.78	7	21	0.85	1.9
	Duliu	Liujiaying	2.06	3	9	0.23	0.51
	Chengquantun	Tancun	1.29	2	7	0.18	0.41
<b>Total</b>			<b>36.54</b>	<b>25</b>	<b>84</b>	<b>0.44</b>	<b>1.18</b>

## 2) Social security

According to the Notice of the General Office of the Tianjin Municipal Government on Further Strengthening Land Acquisition Management, before LA approval, the land user shall pay endowment insurance premiums for LEFs in addition to LA compensation, and deposit such premiums to the special account before LA approval.

According to the Interim Measures for Social Security for Land-expropriated Farmers of Tianjin Municipality, LEFs shall be covered by social security in a unified manner. The number of insured LEFs shall be the acquired cultivated area divided by the per capita cultivated area before LA.

According to the Notice on Levels of Contribution to Basic Endowment Insurance Premiums for Urban and Rural Residents by Land-expropriated Farmers (TMLSS [2018] No.17), for an LEF covering basic endowment insurance for urban and rural residents, premiums shall be paid by the land user for 15 years at a time in addition to location-based prices for acquired land at one of the 3 contribution levels, namely 8,030 yuan, 7,027 yuan and 6,023 yuan per annum.

In 2018, the contribution level for LEFs covering basic endowment insurance for urban and rural residents in Tianjin was 8,030 yuan, and premiums for 15 years totaled 120,450 yuan, which will be paid by the client in addition to location-based prices for acquired land.

The number of LEFs insured under the Project has not been fixed. The district land and resources bureau will determine the number of LEFs of each village to be resettled based on the acquired land area and the per capita land area of that village. When the number of LEFs insured is determined, this RAP will be updated.

### 5.2.1 Income Restoration and Resettlement of the Population Affected by LA in the Hebei Project Area

The Yongqing relay station, Anci distribution station, and 7, 8, 9 and 10# valve houses will be constructed in the Hebei segment of the Project, involving the permanent acquisition of 56 mu of collective land in 7 villages, affecting 29 households with 119 persons. The main income restoration measures for the population affected by permanent LA in Hebei are cash compensation and social security.

#### 1) Cash compensation

According to the Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land, the compensation for acquired collective land shall be the location-based price multiplied by the acquired land area. No organization or individual shall raise or lower the compensation rate without authorization. According to the Notice of the Hebei Provincial Government on Revising Location-based Prices for Acquired Land, the compensation rates of the Project are as follows: Fashang Village, Jiuzhou Town, Guangyang District—115,000 yuan/mu; Jiaozhuang and Nanrenying Villages, Bieguzhuang Town, Yongqing County—79,000 yuan/mu; Xiaocixiang Village, Yangshuiwu Xiang, Anci District—99,000 yuan/mu; Zhongmazhuang Village in Diaohetou Xiang, Donggugangsi Village in Donggugang Town and Nandi Village in Geyucheng Town—74,000 yuan/mu. All compensation rates are at Replacement Cost.

According to the Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land (HPG [2008] No.132), 20% of the land compensation shall belong to the collective economic organization, and 80% to the holder of the land use right or contracting household; if the acquired land has no holder of the land use right and is not contracted, 100% the land compensation shall belong to the collective economic organization for distribution or use according to law.

56 mu of land will be acquired in the Hebei segment. The LA compensation is 4.7662 million yuan, in which 3.813 million yuan will be paid to the AHs and 953,200 yuan withheld by collectives. See Table 5-3.

**Table 5-3 LA Compensation Distribution in Affected Villages in Hebei**

District / county	Township	Village	Compensation rate	LA area (mu)	Compensation (0,000 yuan)	Paid to AH	Withheld by collective (0,000 yuan)
Guangyang District	Jiuzhou Town	Fashang	11.5	2.66	30.59	24.47	6.12
Yongqing County	Bieguzhuang Town	Jiaozhuang	7.9	2.61	20.62	16.5	4.12
		Nanrenying	7.9	10.17	80.34	64.27	16.07
Anci District	Yangshuiwu Xiang	Xiaocixiang	9.9	17.97	177.9	142.32	35.58
	Diaohetou Xiang	Zhongmazhuang	7.4	17.41	128.83	103.07	25.77
	Donggugang Town	Donggugangsi	7.4	2.6	19.24	15.39	3.85
	Geyucheng Town	Nandi	7.4	2.58	19.09	15.27	3.82
<b>Total</b>				<b>56</b>	<b>476.62</b>	<b>381.3</b>	<b>95.32</b>

The AHs in the Hebei segment will lose 1.93 mu of land on average, 0.47 mu per capita. The acquired land is mostly used for corn cultivation, with net income of about 1,000 yuan/mu, so the per capita annual income loss is 470 yuan/mu. The per capita land compensation will be 32,000 yuan. If this sum is deposited in the bank, the annual interest will be 1,056 yuan (3-year time deposit rate 3.3%), higher than the annual income loss. Of course, depositing the compensation in the bank is only one of the risk-free income restoration measures, but it can be seen that the compensation is largely sufficient for income restoration.

**Table 5-4 LA Area and Compensation of AHs in Hebei**

District / county	Township	Village	LA area (mu)	Affected by LA		Paid to AH (0,000 yuan)	Per capita land loss (mu)	Per capita compensation (0,000 yuan)
				HHs	Population			
Guangyang District	Jiuzhou Town	Fashang	2.66	3	11	24.47	0.6	2.22
Yongqing County	Bieguzhuang Town	Jiaozhuang	2.61	3	13	16.5	0.72	1.27
		Nanrenying	10.17	4	18	64.27	0.22	3.57
Anci District	Yangshuiwu Xiang	Xiaocixiang	17.97	6	25	142.32	0.23	5.69
	Diaohetou Xiang	Zhongmazhuang	17.41	7	29	103.072	0.2	3.55
	Donggugang Town	Donggugangsi	2.6	3	12	15.39	0.57	1.28
	Geyucheng Town	Nandi	2.58	3	11	15.27	0.24	1.39
<b>Total</b>			<b>56</b>	<b>29</b>	<b>119</b>	<b>381.3</b>	<b>0.47</b>	<b>3.20</b>

## 2) Social security

According to the Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land (HPG [2008] No.132), before the approval of farmland acquisition, the municipal / county government shall fix social security costs for LEFs at not less than 10% of the location-based price, and such costs shall be transferred to the special account and used specifically for social security for LEFs.

The land permanently acquired for the Project will be allocated, and social security costs for LEFs will be paid by the client additionally. In Anci District, Guangyang District and Yongqing County, the contribution level of social security costs for LEFs is 25% of the location-based price for acquired land; since 56 mu of land will be acquired in the Hebei segment, and the LA compensation is 4.7662 million yuan, the client will pay social security costs for LEFs of 1.1916 million yuan, which will be transferred fully to the deposit accounts of the district / county labor and social security bureaus before LA approval.

**Table 5-5 Social Security Costs for LEFs in Hebei**

District / county	Township	Village	LA area (mu)	Compensation (0,000 yuan)	Social security costs
Guangyang District	Jiuzhou Town	Fashang	2.66	30.59	7.65
Yongqing County	Bieguzhuang Town	Jiaozhuang	2.61	20.62	5.15

		Nanrenying	10.17	80.34	20.09
Anci District	Yangshuiwu Xiang	Xiaocixiang	17.97	177.90	44.48
	Diachetou Xiang	Zhongmazhuang	17.41	128.83	32.21
	Donggugang Town	Donggugangsi	2.6	19.24	4.81
	Geyucheng Town	Nandi	2.58	19.09	4.77
<b>Total</b>			<b>56</b>	<b>476.62</b>	<b>119.16</b>

According to the Opinions of the Hebei Provincial Government on Establishing the Endowment Insurance System for Land-expropriated Farmers, farmers whose per capita cultivated area is insufficient to maintain basic living after LA shall be included in endowment insurance for LEFs. If an LEF has not attained the statutory working age, the resettlement subsidy shall be paid at a time.

The number of LEFs insured under the Project has not been fixed. The district / county labor and social security bureaus will notify the eligibility, number of LEFs, funding source and contribution level to the district / county land and resources bureaus, and each village committee will submit the list of LEFs insured to the township government for approval.

After LA, social security costs will be fully paid to the special account, and the handling agency will go through the social security procedure, and transfer costs to the individual and pooling accounts. LEFs having paid premiums in full will receive a pension monthly after attaining 60 years for men or 55 years for women.

### 5.2.3 Resettlement of the Population Affected by Temporary Land Occupation

The population affected by temporary land occupation will receive compensation for temporary land occupation and ground attachments, and the occupied land will be reclaimed after construction. These restored land areas will be given back to original users. No deep-rooted plant should be grown within 5m on both sides of the pipeline, and the land occupied temporarily within this range will be compensated for permanently. For the rest of the temporary land occupation, the user's will be able to conduct the same functions they used to perform prior to temporary acquisition. The Project will involve the temporary occupation of 10,074.93 mu of land, affecting 8751 households with 27,157 persons, including 6,870.3 mu in the Tianjin segment, affecting 4,947 households with 15,476 persons; 3,203.85 mu in the Hebei segment, affecting 3,802 households with 116,74 persons; and 0.78 mu in the Beijing segment, affecting two households with 17 persons.

#### 1) Payment of compensation for temporary land occupation and ground attachments

There is no compensation rate for temporary land occupation in the project area. The minimum compensation rate for temporary land occupation in Tianjin and Hebei has been fixed at about 2,000 yuan/mu (excluding crop compensation), and that in Daxing District, Beijing about 4,000 yuan/mu (excluding crop compensation). Cultivated land in the project area is used for corn cultivation mainly, with net income of 800-1,000 yuan/mu. The compensation rates for temporary land occupation under the Project can fully cover losses.

If any occupied land has not been cultivated at the time of construction, the land user will also pay young crop compensation to the AH, usually at the compensation rate for temporary land occupation; if there are already crops, seedlings, fruit trees, etc. on any occupied land, such young crops and ground attachments will be compensated for at their actual values in addition to land compensation. The land user will enter into a compensation agreement with each AH, and pay the compensation for temporary land occupation to its account before construction.

The compensation rates for young crops and ground attachments under the Project are higher than their actual values, and will ensure full income restoration.

No deep-rooted plant should be grown within 5m on both sides of the pipeline. Therefore, land occupied temporarily within this range will be compensated for permanently. Such compensation rate in Tianjin and Hebei is 24,000 yuan/mu, and that in Daxing District, Beijing 60,000 yuan/mu. In fact, the AHs may grow corn and other crops within this range.

## **2) Land reclamation**

For land damaged by excavation, compression, collapse, etc. during construction, the land user will reclaim such land in strict conformity with the reclamation program approved by the land and resources authority to ensure that it is restored to the original condition. The contractor will strip top soil for occupied cultivated land and woodland, and stripped top soil will be used for reclamation. If reclamation is nonconforming, land reclamation fees will be paid.



## **6. Information Disclosure, Public Participation and Consultation**

Information disclosure, public participation and consultation are an essential part of the Project's social assessment. The effective participation of the stakeholders can improve project sustainability and acceptability, and enhance the public understanding and support of the Project.

Involuntary resettlement will cause many problems to the APs. If the stakeholders have an appropriate understanding of the Project, and are allowed to make meaningful choices, these problems can be mitigated to a great extent.

The owner attaches great importance to public participation, and conducted extensive participation and consultation during the feasibility study and RAP preparation. During RAP implementation, further public participation and consultation will be encouraged.

### **6.1 Information Disclosure, Public Participation and Consultation at the Feasibility Study Stage**

During the feasibility study, Global Choice Project Consulting, Inc. – the social assessment agency of the Project – and the School of Public Policy and Management, Tsinghua University were appointed by the owner to conduct extensive information disclosure, consultation and public participation in the project area with the assistance of the PMO from October 2018 to July 2019.

#### **6.1.1 Information Disclosure, Public Participation and Consultation in the Tianjin Project Area**

The Project will affect 55 villages in 15 townships / sub-districts in Binhai New, Xiqing, Wuqing and Jinghai Districts in Tianjin. From October 17, 2018 to February 26, 2019, the task force from Global Choice Project Consulting, Inc. performed the following tasks with the assistance of the PMO:

##### **1) Information disclosure**

The task force released a notice on its website, and posted an announcement on the bulletin boards of the local township governments and village committees to disclose the project overview, matters of public consultation, and the contractor's contact information to collect public comments and suggestions.

##### **2) Consultation with Government Agencies**

In order to learn the relevant government agencies' attitudes to and requirements for the Project, the task force visited the social stability and complaint handling offices, and other agencies under the Binhai New, Xiqing, Wuqing and Jinghai Districts, and 12 township governments. See Table 6-1.

**Table 6- 1 Attitudes to and Requirements for the Project of the Government**

<b>Government agencies</b>	<b>Type</b>	<b>Requirements and suggestions</b>
Xiqing District Complaint Handling Office, Xinkou Town Integrated Management Office, Wuqing District Complaint Handling Office, Jinghai District Complaint Handling Office, Tuanbo Town Government, Xizhaizhuang Town Government, Duliu Town Government, Wangqingtu Town Government, Zhongtang Town Urban Construction Office	Compensation	The competent departments for land expropriation should ensure the open unification and transparency of compensation standards. Relevant government departments should strictly supervise the release of compensation funds; The construction unit shall ensure that the full amount of compensation funds is in place in a timely manner.
Nangang Industrial Zone Economic Development Bureau, Wuqing District Social Stability Office, Wuqing District Complaint Handling Office, Tuanbo Town Government	Construction safety	Safety management should be strengthened in the construction process, and preventive measures should be taken for hidden safety problems.
Beidagang Wetland Reserve, Xinkou Town Integrated Management Office, Wuqing District Social Stability Office, Jinghai District Complaint Handling Office, Chenguantun Town Government, Duliu Town Government	Route optimization	If the pipeline laying involves the vegetable greenhouses of the underground natural gas storage tank in the fishpond, it is suggested that the project construction unit should optimize the route to avoid affecting the normal operation of the existing industry as much as possible.
Wuqing District Social Stability Office, Chenguantun Town Government, Wangqingtu Town Government	Communication with local governments	In terms of land expropriation and occupation, the project construction unit should communicate with the local government in advance and communicate and negotiate with the affected villages through the competent departments of the local government.
Beidagang Wetland Reserve	Handling of procedures	Beidagang wetland is within the ecological land protection red line. The project owner should complete relevant procedures as soon as possible.
Tuanbo Town Government, Duliu Town Government	Tomb relocation	If the project involves moving graves, to choose a good time to move graves, staggered tomb-sweeping day, do not destroy the custom.
Chenguantun Town Government	Cultural relic protection	It is suggested that the project should avoid the local cultural relics in the western han dynasty when laying pipelines.

### 3) Survey on affected villages and villagers

The project's external transmission line project affected 55 villages in the tianjin project area. The working group visited 33 villages, accounting for 60% of all affected villages. By holding a questionnaire survey on the forum, the villagers' committee and the public were widely consulted, and in-depth public participation and consultation were conducted. See Table 6-2.

**Table 6- 2 Comments and Suggestions of Village Committees**

Village	Type	Requirements and suggestions
Xuejiafangzi in Tuanbai Town; Dongshuangtang in Shuangtang Town; Xichangtun, Wangguantun, Xiaoji and Huxinzhuang in Chenguantun Town; Xinzhuangzi, Dongjiakou, Qiandengzhuang and Donghetou in Liangtou Town; Yangliyuan, Dahetan, Xiaokouzimen and Yidunkou in Jinghai Town	Impact compensation	①Fix LA compensation rates according to law; ②The compensation rates for temporary land occupation will be fixed in consultation with affected villages and villagers, and reasonable and transparent; ③Compensation should be paid fully and timely.
Shenglijie, Yihejie, Jiushibao, Minzhujie and Tuanjiejie in Dulu Town; Shunmintun and Yangxiaozhuang in Xizhaizhuang Town; Yangliyuan, Dahetan, Xiaokouzimen and Yidunkou in Jinghai Town	Construction management	①Strengthen the management of construction workers, and avoid conflicts with local residents; ②Strengthen construction safety management and ensure the traffic safety of villagers; ③The pipeline should be kept at a sufficient distance from residences.
Dongmoyuan in Shuangtang Town; Xichangtun in Chenguantun Town; Xinzhuangzi in Liangtou Town	Reclamation	Strengthen land reclamation after pipeline construction to ensure quality restoration.
Qiandengzhuang in Liangtou Town; Manjingzi in Daqiuzhuang Town; Xishuangtang in Shuangtang Town	Starting time	The pipeline should be laid before sowing or after harvest in order not to affect farming.
Pulou in Shuangtang Town	Operating belt	The width of the operating belt should be consistent with that specified in the contract.
Dongjiakou in Liangtou Town	Communicati on+	The contractor and design agency should communicate with local governments on the route, land occupation, compensation rates, etc.

The task force also conducted a questionnaire survey in 33 affected villages, with 516 copies distributed and 516 copies recovered, with an effective rate of 98.26%.

The survey shows that the main income sources of local residents are farming and employment. 87.77% of the respondents support the Project, 10.45% don't care and 1.78% don't support it due to safety concerns. Their main expectations for the Project are reasonable compensation rates, timely compensation payment and benefits for local residents, such as domestic gas supply. 78.16% of the respondents would file appeals to village committees, 21.16% to the contractor and 0.68% to higher authorities.

### 6.1.2 Information Disclosure, Public Participation and Consultation in the Hebei Project Area

The Project will affect 37 villages in 7 townships in Yongqing County, Anci District and Guangyang District in Hebei. From March 20 to July 24, 2019, the task force from Global Choice Project Consulting, Inc. performed the following tasks with the assistance of the PMO:

#### 1) Information disclosure

The task force released a notice on its website, and posted an announcement on the bulletin boards of the local township governments and village committees to disclose the project overview, matters of public consultation, and the contractor's contact information to collect public comments and suggestions.

## 2) Consultation with Government Agencies

In order to learn the relevant government agencies' attitudes to and requirements for the Project, the task force inquired of the relevant government agencies. All of them support the Project, and expect the contractor to strengthen communication and coordination with the local government, and consultation with the APs.

The task force visited the governments of Donggugang Town, Geyucheng Town, Diaohetou Xiang and Yangshuiwu Xiang in Anci District, Jiuzhou Town in Guangyang District, and Bieguzhuang and Hancun Towns in Yongqing County, and held FGDs with government staff. All township governments support the Project, and think that the Project will have minor production and livelihood impacts on local residents, but the contractor should pay more attention to compensation, construction safety, route optimization, and communication between the contractor and local governments.

## 3) Survey on affected villages and villagers

The task force visited 29 villages, accounting for 78.4% of the 37 affected villages in Tianjin, and conducted extensive public consultation by means of FGD and questionnaire survey. See Table 6-3.

**Table 6-3 Attitudes to, and Comments and Suggestions on the Project of Village Committees**

Township	Village	Attitude, comments and suggestions
Donggugang Town	Disijie, Yushuyuan, Mochagang	Of the 29 village committees, the remaining 28 villages expressed support for the project construction, and most of the village committees believed that the construction and operation of the project's out-of-the-way pipeline would mainly affect the lives of the surrounding residents: the occupation of cultivated land would affect agricultural production and reduce the income of the affected people. Poor management during construction will affect the daily life of the villagers. The recommendations of the village committee are: the compensation standard should be reasonable, open and transparent, the compensation fee should be paid in place before the construction, and the construction should pay attention to maintain environmental health, civilized construction, safe construction and so on.
Geyucheng Town	Xinzhuangzi, Xiaomachang, Xiaguan, Guochang, Nandi	
Diaohetou Xiang	Xiaoshenzhuang, Halagang, Huangdi, Huzhuangzi	
Yangshuiwu Xiang	Chaijiawu, Mengcun, Nanciping, Chanfang, Dabeishi	
Bieguzhuang Town	Nanrenying, Nanliuzhuang, Guandao, Liuheng, Jiaozhuang	
Hancun Town	Hengting	
Jiuzhou Town	Fashang, Gaoxinzhuang, Zhaogezhuang, Wangma, Majiawu, Nanhan	

The task force distributed 710 copies of the questionnaire and recovered 705 valid copies in 29 affected villages, with an effective rate of 99.3%.

According to the survey, 93.62% of the respondents support the Project. The main income sources of local residents are farming and employment, and farming is the No.1 income source for 60% of local households, so local residents are very concerned about land acquisition and occupation impacts on farming. They expect construction impacts to be minimized, the affected land to be reclaimed timely, and unavoidable impacts to be compensated for reasonably. 96.08% of the respondents think the Project has no or little impact, 0.57% think the Project has ordinary impacts, and 2.55% think the Project has major impacts.

### **6.1.3 Information Disclosure, Public Participation and Consultation in the Beijing Project Area**

The Project will affect Dianzi Village, Lixian Town, Daxing District in Beijing. In March 2019, the task force from the School of Public Policy and Management, Tsinghua University performed the following tasks with the assistance of the PMO:

#### **1) Interview with a leader of the Lixian Town HD Management Office**

On March 28, the task force interviewed the head of the Lixian Town HD Management Office. He thinks that the Project is an important measure of ensuring Beijing's safe gas supply, and promoting the balanced development of Beijing, Tianjin and Hebei, and the agencies concerned of Lixian Town will support it. There is a relocation plan for the Dianzi south graveyard occupied for the final station, but support from the contractor is required, including adequate financial support.

#### **2) FGD with village officials**

On March 20, the task force held an FGD with the head and officials of Dianzi Village to learn the village's socioeconomic profile, and the village committee's attitude to and comments on the Project. The village committee thinks that the Project is an important natural gas pipeline project of China, and should be supported by all. Although electricity is the main domestic energy source of this village, and there is little demand for natural gas, the Project will supply natural gas to New Hangcheng Community – the resettlement community for this village under construction. The contractor should pay particular attention to construction noise and damages in order not to affect villagers' daily production and lives. Although the station is far away from the village, its safety is still a concern of the village committee, so the contractor should conduct safety control during construction and operation properly. The Lixian Town Government has a relocation plan for the graveyard occupied for the final station, and the new site is close to the village, so its relocation will have little impact on villagers.

#### **3) Villager interview and questionnaire survey**

During March 20-28, the task force conducted a questionnaire survey with a sampling rate of 10% in Dianzi Village. On March 28, the task force interviewed some villagers to learn their attitudes to, and comments and suggestions on the Project. 98% of the respondents support the Project, and 97% agree with graveyard relocation for the Project. They think that the graveyard should be

relocated in consultation with them and in honor of their customs, and the compensation should be reasonable. Since fruit trees were damaged by construction vehicles in other past projects, the contractor is expected to pay particular attention to this and manage to reduce construction noise.

## 6.2 Information Disclosure, Public Participation and Consultation at the RAP Preparation Stage

In August 2019, the task force of the Shanxi Academy of Social Sciences conducted extensive consultation with the local natural resources and planning, and labor and social security bureaus, township governments, and village committees on compensation measures and rates, resettlement measures, attitudes, opinions, suggestions, etc.

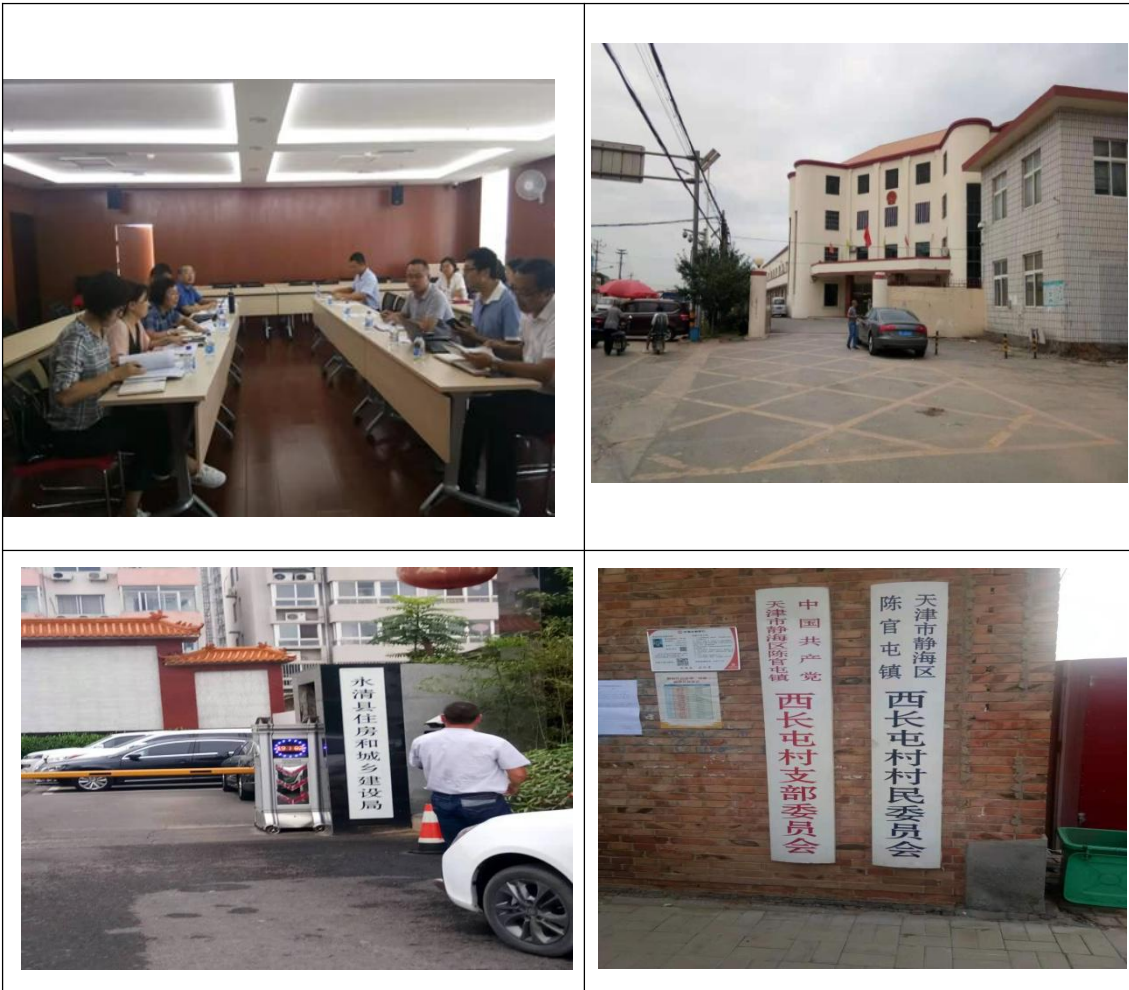






Figure 6-1 FGDs and Questionnaire Survey by the Task Force

### 6.2.1 Consultation with Government Agencies

The task force visited the government agencies concerned of Tianjin, Hebei and Beijing, and inquired of regulations, policies and measures on LA compensation and LEF resettlement. See Table 6-4.

Table 6-4 Consultation with Government Agencies Concerned

Division	Agencies concerned	Scope of consultation
Tianjin	Tianjin Municipal Natural Resources and Planning Bureau; Binhai New District Resources and Planning Bureau	Local regulations and policies on LA compensation and social security for LEFs; location-based prices for acquired land applicable to the Project; compensation policy for temporary land occupation, etc.
Langfang, Hebei	Langfang Municipal Land and Resources Bureau, and Guangyang District, Anci District and Yongqing County branches	Local regulations and policies on LA compensation and social security for LEFs; location-based prices for acquired land applicable to the Project; compensation policy for temporary land occupation, etc.
Beijing	Daxing District Natural Resources and Planning Bureau	Minimum protective LA compensation rates, Measures for Compensation and Resettlement for Land Acquired for Construction Purposes of Beijing Municipality



## 6.2.2 Survey on Township Governments

The task force held FGDs with leaders and staff of the governments of Chengquantun Town, Jinghai District and Wangqingtu Town, Wuqing District in Tianjin, and Geyucheng Town, Anci District, Jiuzhou Town, Guangyang District and Lixian Town, Daxing District in Langfang, Hebei to learn local socioeconomic profile, labor employment, income sources and level, women's social status and participation, minority population, poor population, MLS population, compensation and resettlement practices of past projects, duties of township governments, etc., and inquired of them about comments and suggestions on the Project.

## 6.2.3 Public Participation and Questionnaire Survey in Affected Villages

The task force conducted a questionnaire survey on 52 sample households selected randomly in 4 villages, namely Xichangtun Village, Chengquantun Town, Jinghai District, and Guankeng Village, Daqiu Zhuang Town, Jinghai District in Tianjin, and Nandi Village, Geyucheng Town, Anci District and Nanrenying Village, Bieguzhuang Town, Yongqing County in Langfang Hebei.

According to the survey, over 60% of the respondents were aware of the Project on month in advance, 84.6% support the Project, 1.9% do not support the Project because they are unaware of it, 98.1% accept land occupation for the Project provided compensation is reasonable and paid timely, nearly 70% are well aware of local compensation policies and rates for permanent LA and temporary land occupation, and 57.7% are aware of appeal channels. The task force explained the construction scope and impacts of the Project, compensation rates for land acquisition and occupation, construction schedule, grievance redress mechanism, etc. to the respondents and FGD participants. See Table 6-5.

**Table 6- 5 Awareness of, Attitudes to and Expectations for the Project of APs**

Item		N	Percent (%)	
Awareness of and attitude to the Project	When did you first know about the Project?	Very early	4	7.7
		Half a year ago	17	32.7
		3 months ago	4	7.7
		1 month ago	7	13.5
		Just now	20	38.5
		<b>Total</b>	<b>52</b>	<b>100.0</b>
	Do you support the Project?	Yes	44	84.6
		No	1	1.9
		Don't care	7	13.5
		<b>Total</b>	<b>52</b>	<b>100.0</b>

<b>Expectations for LA, temporary land occupation and compensation</b>	<b>Do you accept LA with lawful compensation for the Project?</b>	Yes	46	88.5
		No	6	11.5
		<b>Total</b>	<b>52</b>	<b>100.0</b>
	<b>Do you accept temporary land occupation with lawful compensation for the Project?</b>	Yes	51	98.1
		No	1	1.9
		<b>Total</b>	<b>52</b>	<b>100.0</b>
	<b>Are you aware of the local compensation policies and rates for LA and temporary land occupation?</b>	Highly	3	5.8
		Somewhat	8	15.4
		A little	25	48.1
		None	16	30.8
		<b>Total</b>	<b>52</b>	<b>100.0</b>
	<b>How will you use the land compensation?</b>	Daily consumption	17	32.7
		Depositing at bank	5	9.6
		Buying or building a new house	2	3.8
		Child's marriage	3	5.8
		Investment in agriculture	14	26.9
		Investment in nonagricultural operations	2	3.8
		Insurance	2	3.8
		Child's education	3	5.8
		Old age support	4	7.7
<b>Total</b>		<b>52</b>	<b>100.0</b>	
<b>Do you know how to file an appeal when you're treated unfairly during land acquisition or occupation?</b>	Yes	30	57.7	
	No	22	42.3	
	<b>Total</b>	<b>52</b>	<b>100.0</b>	

### 6.3 Information Disclosure, Public Participation and Consultation at the RAP Implementation Stage

After this RAP is approved by AIIB, it will be disclosed on the websites of AIIB and the owner. An RIB will be prepared, distributed to all village committees, and made available to all APs.

Public participation will be encouraged during the whole process of RAP preparation:

Public participation during the DMS: Each AH will sign to confirm land acquisition and occupation impacts, and compensation amount, and each village would disclose all compensation and resettlement matters for public supervision.

Public participation in land compensation management, distribution and use: A village collective must use withheld land compensation with the approval of the village congress and under the supervision of villager representatives.

Public participation in project construction: Public participation will be encouraged during construction to ensure that the APs benefit from the Project, and local building materials and laborers will be used with priority under equal conditions.

## 7. Budget for LA Compensation and Social Security for LEFs

The estimated resettlement budget of the Project is 286.6553 million yuan, including compensation for LA, temporary land occupation and attachments, and social security costs for LEFs. Such costs will be included in the general budget of the Project, and borne by the contractor.

This budget will be updated after the DMS results are verified and the insured LEFs are fixed.

### 7.1 LA Compensation, Temporary Land Occupation and Ground Attachments

#### 7.1.1 LA Compensation

154.88 mu of land will be acquired permanently for the Project, and the LA compensation for 114.89 mu of collective farmland is 10.6441 million yuan. See Table 7-1.

Table 7- 1 Compensation for LA

District / county	Township	Village	Compensation rate (0,000 yuan/mu)	LA area (mu)	Compensation (0,000 yuan)
Wuqing District	Wangqingtu Town	Yijie	2.9	1.63	4.73
Xiqing District	Xinkou Town	Xiaxinkou	8.3	2.53	2.10
Binhai New District	Zhongtang Town	Changliuzhuang	4	2.53	1.01
Jinghai District	Daqiuozhuang Town	Dongshang Dock	3.4	12.74	4.33
	Daqiuozhuang Town	Guankeng	3.4	0.19	0.65
	Xizhai Town	Hexin	2.8	20.58	57.62
	Duliu Town	Liujiaying	2.8	2.53	7.08
	Chenguantun Town	Tancun	2.8	1.56	4.37
<b>Subtotal</b>				<b>44.29</b>	<b>148.88</b>
Guangyang District	Jiuzhou Town	Fashang	11.5	2.66	30.59
Yongqing County	Bieguzhuang Town	Jiaozhuang	7.9	2.61	20.62
		Nanrenying	7.9	10.17	80.34
Anci District	Yangshuiwu Xiang	Xiaocixiang	9.9	17.97	177.90
	Diaohetou Xiang	Zhongmazhuang	7.4	17.41	128.83
	Donggugang Town	Donggugangsi	7.4	2.6	19.24
	Geyucheng Town	Nandi	7.4	2.58	19.09
<b>Subtotal</b>				<b>56</b>	<b>476.62</b>
Daxing District	Lixian Town	Dianzi	30	<b>14.63</b>	438.9
<b>Total</b>					<b>1064.41</b>

### 7.1.2 Compensation for Temporary Land Occupation

10,074.93 mu of land will be occupied temporarily for the Project, including 9,502.53 mu for pipeline construction, and 572.4 mu for temporary land construction and material stage. The temporarily occupied land within 5m on both sides of the pipeline will be compensated for permanently, and the other temporarily occupied land subject to regular compensation. Since the operating belt for pipeline construction is usually 28m wide, 3,420.91 mu of land will be compensated for permanently, accounting for 36%, and 6,654.02 mu of land will be compensated for regularly. The total amount of compensation for temporary land occupation is 95.4209 million yuan. See Table 7-2.

Table 7- 2 Compensation for Temporary Land Occupation

Division	Temporarily occupied land within 5m on both sides of the pipeline			Temporarily occupied land subject to regular compensation			Total compensation (0,000 yuan)
	Occupied land area (mu)	Compensation rate (yuan/mu)	Compensation (0,000 yuan)	Occupied land area (mu)	Compensation rate (yuan/mu)	Compensation (0,000 yuan)	
Tianjin	2335.23	24000	5604.552	4535.07	2000	907.01	6511.562
Hebei	1085.4	24000	2604.96	2118.45	2000	423.69	3028.65
Beijing	0.28	60000	1.68	0.50	4000	0.20	1.88
Total	3420.91		8211.19	6654.02		1330.90	9542.09

### 7.1.3 HD Compensation

Houses of 41,900 m<sup>2</sup> will be affected by the Project, and the total compensation is 17.598 million yuan. See Table 7-3.

Table 7- 3 HD Compensation

Province / municipality	District / county	Township	Village	House area (m <sup>2</sup> )	Compensation rate (yuan/m <sup>2</sup> )	Compensation (0,000 yuan)
Tianjin	Jinghai District	Tuanbo Town	Xuejiafangzi	3500	420	147
		Duliu Town	Jiushibao	5600	420	235.2
			Youhaojie	3800	420	159.6
		Chengquantun Town	Wangguantun	4000	420	168
			Zoujiazui	4000	420	168
		Liangtou Town	Dongjiakou	1500	420	63
			Dongshatou	2000	420	84

		Caigongzhuang Town	Caigongzhuang	10000	420	420
	Xiqing District	Xinkou Town	Shuigaozhuang	4500	420	189
	<b>Subtotal</b>			<b>38900</b>	420	1633.8
Langfang, Hebei	Guangyang District	Jiuzhou Town	Huotouying	2500	420	105
Beijing	Daxing District	Lixian Town	Dianzi	500	420	21
<b>Total</b>				<b>41900</b>	420	1759.8

#### 7.1.4 Compensation for Ground Attachments

The compensation for ground attachments includes compensation for greenhouses, seedlings, fruit trees, tombs and telegraph poles, totaling 159.1508 million yuan.

##### 1) Greenhouses

The Project will affect 275 greenhouses with a total area of 275,000 m<sup>2</sup>, and total compensation of 17.875 million yuan. See Table 7-4.

##### 2) Seedlings

The Project will affect 294,583 poplars, willows and locust trees, including 153,163 small seedlings; 84,750 medium seedlings and 56,670 large seedlings, with total compensation of 52.167 million yuan. See Table 7-5.

##### 3) Fruit trees

The Project will affect 164,446 apple, peach and plum trees, and 247,410 grape trees, with total compensation of 88.3018 million yuan. See Table 7-6.

##### 4) Tombs

The Project will affect 82 tombs, with total compensation of 471,000 yuan. See Table 7-7.

##### 5) Telegraph poles

The Project will affect 120 telegraph poles, with total compensation of 336,000 yuan.

Table 7-4 Greenhouse Compensation

Province / municipality	District / county	Township	Village	Greenhouses	Area (m2)	Compensation rate (yuan/m2)	Compensation (0,000 yuan)
Tianjin	Jinghai District	Duliu Town	Fengyi	17	17000	65	110.5
		Chenguantun Town	Jizhuangzi	20	20000	65	130
	<b>Subtotal</b>			<b>37</b>	<b>37000</b>	<b>65</b>	<b>240.5</b>
	Xiqing District	Xinkou Town	Dangcheng	10	10000	65	65
			Diliubu	66	66000	65	429
	<b>Subtotal</b>			<b>76</b>	<b>76000</b>	<b>65</b>	<b>494</b>
<b>Total</b>				<b>113</b>	<b>113000</b>	<b>65</b>	<b>734.5</b>
Langfang, Hebei	Anci District	Yangshuiwu Xiang	Ciping	15	15000	65	97.5
			Mengcun	20	20000	65	130
			Xitapingzhuang	32	32000	65	208
			Chaijiawu	50	50000	65	325
			Xiaocixiang	38	38000	65	247
	<b>Subtotal</b>			<b>155</b>	<b>155000</b>	<b>65</b>	<b>1007.5</b>
	Guangyan g District	Jiuzhou Town	Majiwu	6	6000	65	39
			Huotouying	1	1000	65	6.5
	<b>Subtotal</b>			<b>7</b>	<b>7000</b>	<b>65</b>	<b>45.5</b>
	<b>Total</b>				<b>162</b>	<b>162000</b>	<b>65</b>
<b>Total</b>				<b>275</b>	<b>275000</b>	<b>65</b>	<b>1787.5</b>

Table 7-5 Seedling Compensation

Seedling	Small seedling	Compensation rate (yuan)	Compensation (0,000 yuan)	Medium seedling	Compensation rate (yuan)	Compensation (0,000 yuan)	Large seedling	Compensation rate (yuan)	Compensation (0,000 yuan)	Total compensation (0,000 yuan)
Poplar	51054	27.5	140.40	28250	67.5	190.69	18890	375	708.38	1039.5
Willow	51054	37.5	191.45	28250	132.5	374.31	18890	410	774.49	1340.3
Locust tree	51054	70	357.38	28250	242.5	685.06	18890	950	1794.55	2837.0
<b>Total</b>			<b>689.23</b>			<b>1250.06</b>			<b>3277.42</b>	<b>5216.7</b>

**Table 7- 6 Fruit Tree Compensation**

Stage	Apple, peach, plum	Compensation rate (yuan)	Compensation (0,000 yuan)	Grape	Compensation rate (yuan)	Compensation (0,000 yuan)	Total (0,000 yuan)
Full fruit	41112	925	3802.81	61853	200	1237.05	5039.86
Early fruit	41112	462.5	1901.41	61853	100	618.53	2519.93
Young fruit	41112	185	760.56	61853	40	247.41	1007.97
Sapling	41112	37.5	154.17	61853	17.5	108.24	262.41
Total	164446		6618.952	247410		2211.23	8830.18

**Table 7- 7 Tomb Compensation**

Province / municipality	Qty.	Compensation rate (yuan)	Compensation (0,000 yuan)
Tianjin	27	3000	8.1
Hebei	30	3000	9
Beijing	25	12000	30
Total	82		47.1

## 7.2 Social Security Costs for LEFs

The total of social security costs for LEFs of the Tianjin and Hebei project areas is 3.8415 million yuan.

### 1) Tianjin project area

According to the Notice on Levels of Contribution to Basic Endowment Insurance Premiums for Urban and Rural Residents by Land-expropriated Farmers (TMLSS [2018] No.17), for an LEF covering basic endowment insurance for urban and rural residents, premiums shall be paid by the land user for 15 years at a time in addition to location-based prices for acquired land. The current contribution level of Tianjin is 120,450 yuan per capita, and the number of insured LEFs is the acquired cultivated area divided by the per capita cultivated area before LA. According to the survey, the per capita cultivated area in the Tianjin project area is about 2 mu, and 44.29 mu of land will be acquired for the Project, so 22 LEFs will be insured, and the client will pay premiums of 2.6499 million yuan for them.

### 2) Hebei project area

According to the Notice of the Hebei Provincial Government on the Application of Location-based Prices for Acquired Land, before the approval of farmland acquisition, the municipal / county government shall fix social security costs for LEFs at not less than 10% of the



location-based price, and such costs shall be transferred to the special account and used specifically for social security for LEFs. In Anci District, Guangyang District and Yongqing County, the contribution level of social security costs for LEFs is 25% of the location-based price for acquired land; since 56 mu of land will be acquired in the Hebei segment, and the LA compensation is 4.7662 million yuan, the client will pay social security costs for LEFs of 1.1916 million yuan.

### 7.3 Disbursement Plan and Funding Sources

All compensation and resettlement funds fees under the Project will be from local counterpart funds and domestic loans, and paid in stages before or during construction. See Table 7-8.

**Table 7- 8 Compensation Payment Schedule**

Year	2019	2020	2021	2022	Total
<b>Compensation paid (0,000 yuan)</b>	4000.15	10206.36	10206.36	4252.65	28665.53
<b>Percent (%)</b>	13.95%	35.61	35.61	14.84	100

### 7.4 Fund Flow

The compensation and resettlement funds under the Project will be disbursed and used according to the rates specified in the RAP under the supervision of the internal and external monitoring agencies.

The owner will provide all funds for compensation and resettlement. Before LA approval, the owner will pay social security costs for LEFs. One month before construction, all land compensation, resettlement subsidy and compensation for ground attachments will be paid to the accounts of the affected village committees, and then paid to the AHs via banks.

## 8. Organizational Structure and Responsibilities

### 8.1 Organizational Structure

To ensure successful resettlement as desired, a systematic organizational structure has been established during project implementation in order to plan, coordinate and monitor resettlement activities.

Except the PMO that is responsible comprehensively for local resettlement, the agencies responsible for compensation and resettlement include natural resources and planning, and labor and social security bureaus, township governments, and village committees. Municipal and county approval bureaus are also involved in Hebei. See Tables 8-1, 8-2 and 8-3..

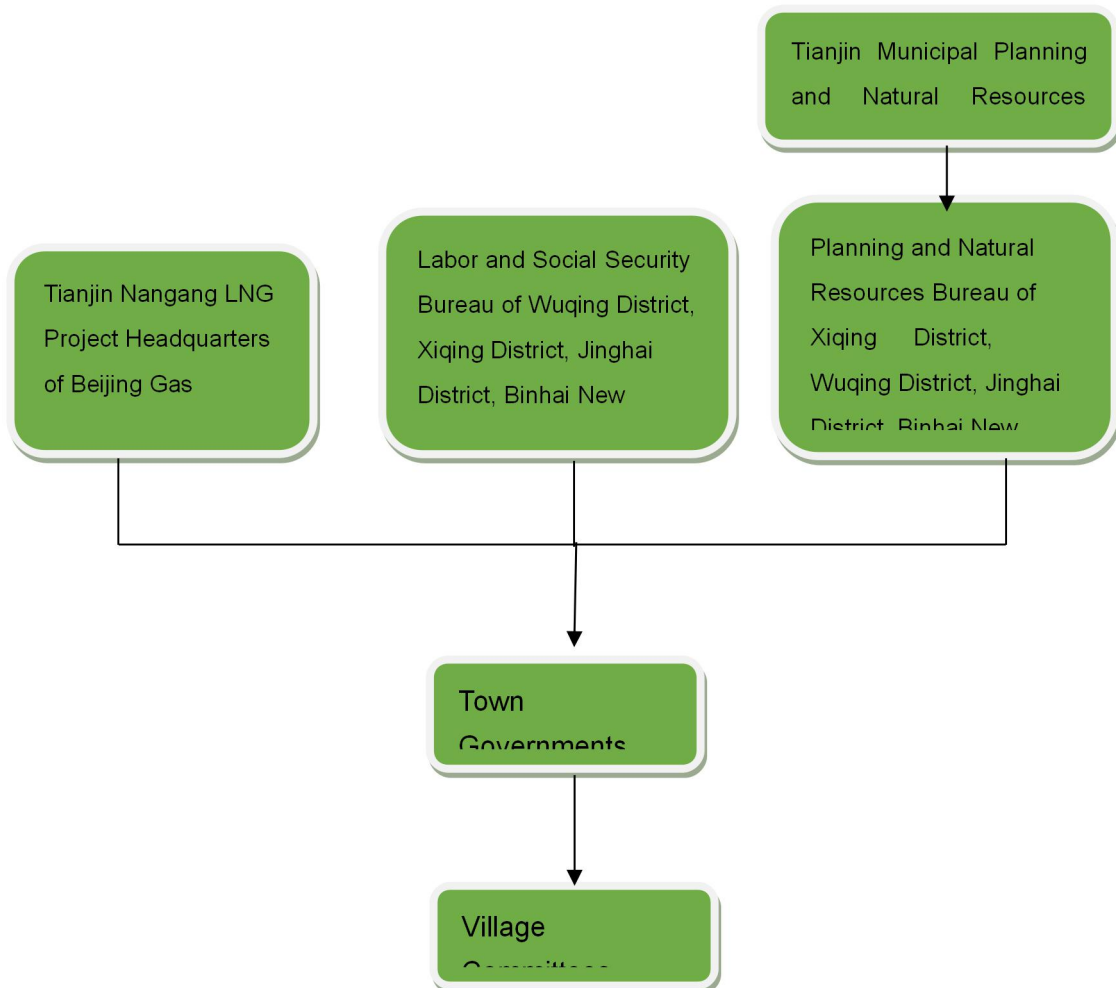


Figure 8- 1 Tianjin regional organization chart

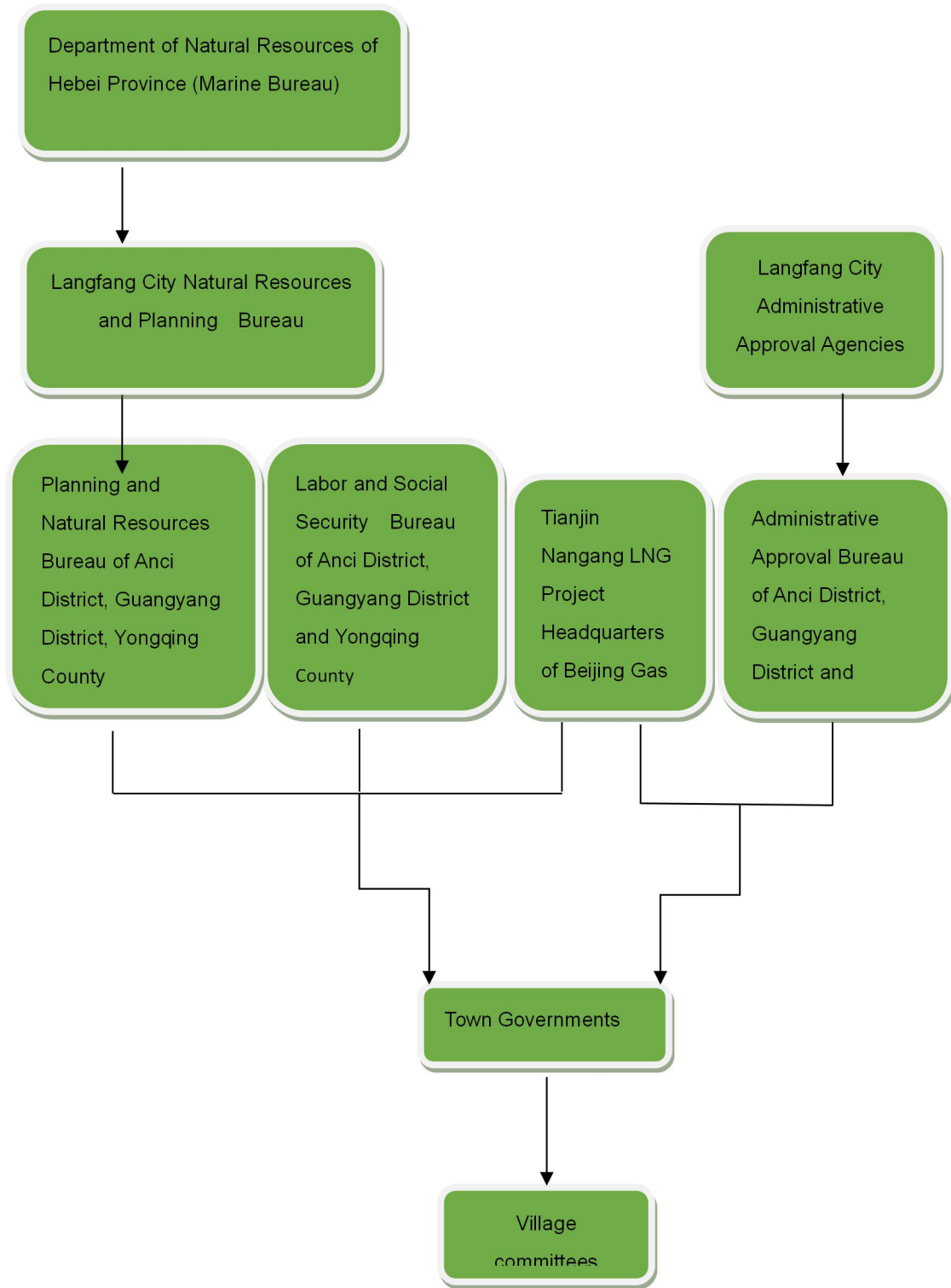


Figure 8-2 Hebei regional organization chart

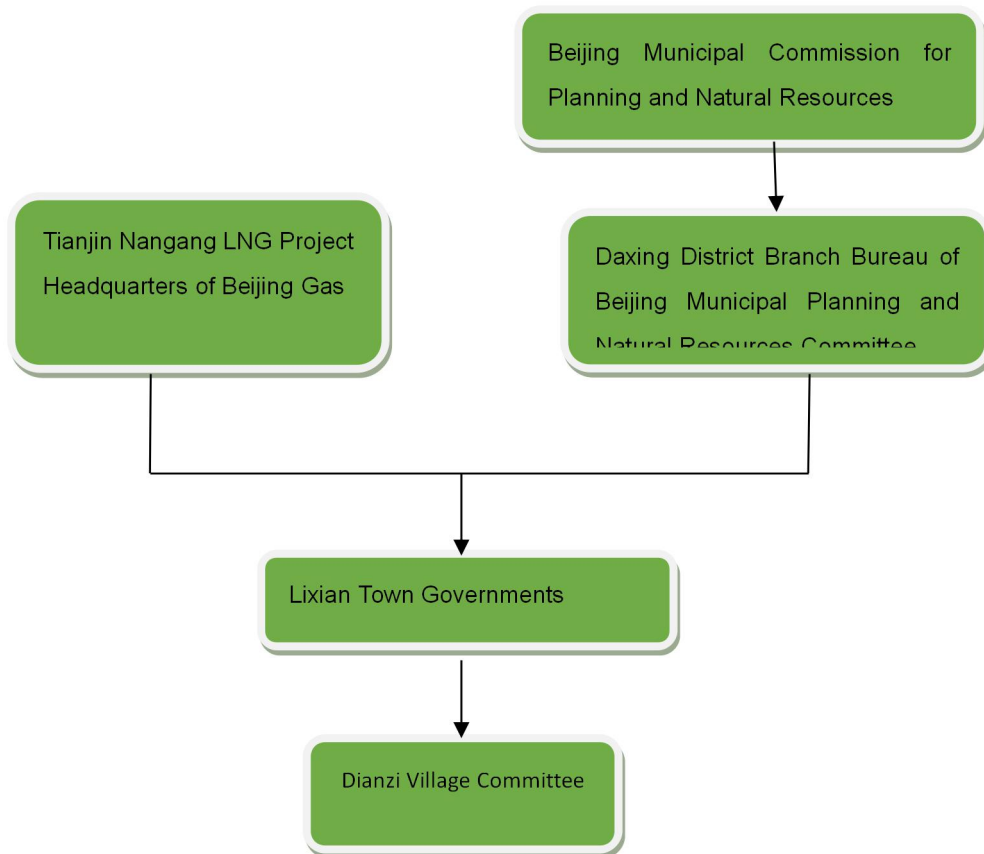


Figure 8-3 Beijing regional organization chart

## 8.2 Organizational Responsibilities

For Tianjin, Hebei and Beijing, the organizational structure responsible for permanent LA and temporary land occupation procedures, compensation, and resettlement differs at the provincial, municipal and district / county levels, but almost the same at the township and village levels.

### 8.2.1 Provincial and Municipal Natural Resources and Planning Agencies

#### 1) Tianjin Municipal Natural Resources and Planning Bureau

- LA handling, review and approval (reported to the municipal or the State Council for approval if necessary);
- Coordinating LA for cross-regional key projects

#### 2) Hebei Provincial Natural Resources Department (Ocean Bureau):

- LA handling, review and approval (reported to the provincial or the State Council for approval if necessary);

#### 3) Beijing Municipal Natural Resources and Planning Commission

- LA handling, review and approval

## **8.2.2 Municipal Natural Resources and Planning, Administrative Approval, and Labor and Social Security Agencies**

### **1) Langfang Municipal Natural Resources and Planning Bureau**

- LA review, handling and approval
- LA management

### **2) Langfang Municipal Administrative Approval Bureau**

- Woodland occupation approval
- Temporary land occupation approval
- Issuing planning permits for construction land (including temporarily used land)

## **8.2.3 District / County Natural Resources and Planning, Administrative Approval, and Labor and Social Security Agencies**

### **1) Branches of Binhai New, Jinghai, Xiqing and Wuqing Districts of the Tianjin Municipal Natural Resources and Planning Bureau; Branches of Guangyang District, Anci District and Yongqing County of the Langfang Municipal Natural Resources and Planning Bureau; Daxing District Branch of the Beijing Municipal Natural Resources and Planning Commission**

- LA handling, review and approval;
- Investigating the ownership, type and area of the land to be acquired or temporarily occupied, and the ownership, types and quantities of ground attachments, calculating LA compensation and the number of LEFs to be resettled, and drafting a resettlement program together with the township government and APs;
- Land acquisition and compensation;
- Handling the social security procedure for LEFs in coordination with the administrative authority for labor and social security;
- Disclosing the use, location and compensation rate of the land to be acquired, resettlement mode, subjects of social security, compensation rates, fundraising method, etc.;
- Registering and confirming LA compensation;
- Implementing the LA compensation and resettlement program;
- Approving temporary land occupation;
- Granting permits for pipelines and cables across highways, bridges, tunnels and culverts;

- Issuing planning permits for construction land (including temporarily used land)

## **2) Labor and Social Security Bureaus of Wuqing District, Xiqing District, Jinghai District, Binhai New District; Labor and Social Security Bureaus of Anci District, Guangyang District and Yongqing County**

- Securing social security costs for LEFs;
- Handling the insurance procedure for LEFs;
- Paying benefits to LEFs;
- Taking effective measures to improve vocational and employment skills of LEFs, and developing jobs in diverse ways to promote their employment

### **8.2.4 Local Township Governments**

- Participating in the investigation of the ownership, type and area of the land to be acquired or temporarily occupied, and the ownership, types and quantities of ground attachments;
- Participating in the drafting of the resettlement program;
- Organizing public participation, and giving publicity to regulations and policies on compensation and resettlement for temporary land occupation and LA;
- Approving and supervising land compensation disbursement by village committees;
- Handling conflicts between the contractor, and the affected villages and households

### **8.2.5 Affected Village Committees**

- Participating in the investigation of the ownership, type and area of the land to be acquired or temporarily occupied, and the ownership, types and quantities of ground attachments;
- Organizing village congresses or meetings, and proposing LEFs to be insured to the township government;
- Organizing public participation, and giving publicity to regulations and policies on compensation and resettlement for temporary land occupation and LA;
- Participating in resettlement;
- Reporting resettlement progress to the township government;
- Paying LA compensation to the AHs according to the resettlement program, and disclosing relevant information;

- Reporting comments and suggestions on compensation and resettlement to higher authorities

### 8.2.6 Tianjin Nangang LNG Project Headquarters of Beijing Gas

- Completing tasks assigned by the leading group, higher authorities and AIIB;
- Applying for and disbursing compensation for LA and temporary land occupation;
- Disclosing the purpose of LA for the Project to LEFs;
- Handling compensation and resettlement matters together with the natural resources and planning, and labor social security bureaus, township governments, and village committees;
- Reclaiming temporarily occupied land;
- Coordinating other matters

### 8.2.7 External M&E Agency

The external M&E agency is an experienced third party agency appointed by the PMO, responsible for monitoring RAP implementation, and submitting M&E reports to AIIB through the PMO, as detailed in Chapter 11.

## 8.3 Staffing

In order to facilitate compensation and resettlement, all resettlement agencies are well staffed, and a smooth information channel established. They are composed mainly of competent and experienced administrative and technical staff mainly. See Table 8-1.

**Table 8- 1 Staffing of Resettlement Agencies**

Agency	Workforce	Composition
Tianjin Municipal Natural Resources and Planning Bureau	2	Leaders and staff
Branches of Binhai New, Jinghai, Xiqing and Wuqing Districts of the Tianjin Municipal Natural Resources and Planning Bureau	3 each	Leaders, section heads and staff
Branches of Binhai New, Jinghai, Xiqing and Wuqing Districts of the Tianjin Municipal Natural Resources and Planning Bureau	3 each	Section heads and staff
Hebei Provincial Natural Resources Department (Ocean Bureau)	2	Section heads and staff

Langfang Municipal Natural Resources and Planning Bureau	3	Section heads and staff
Branches of Guangyang District, Anci District and Yongqing County of the Langfang Municipal Natural Resources and Planning Bureau	4 each	Leaders, section heads and staff
Langfang Municipal Administrative Approval Bureau	3	Section heads and staff
Administrative Approval Bureaus of Guangyang District, Anci District and Yongqing County	4 each	Leaders, section heads and staff
Labor and Social Security Bureaus of Anci District, Guangyang District and Yongqing County	4 each	Section heads and staff
Beijing Municipal Natural Resources and Planning Commission	2	Section heads and staff
Daxing District Branch of the Beijing Municipal Natural Resources and Planning Commission	3	Section heads and staff
Local Township Governments	5	Leaders and staff
Affected Village Committees	5	Village officials and statistician, villager representatives
Tianjin Nangang LNG Project Headquarters of Beijing Gas	5	Engineering staff
External M&E agency	5	Staff



## **9. Grievance Redress Mechanism**

As required by AIIB's ESF, an appropriate grievance redress mechanism should be established in accordance with the ESP and ESS to learn the APs' environmental and social concerns and grievances, and ensure that they can protect their rights and interests through this mechanism.

The PMO has also established a grievance redress team to accept and respond to doubts, appeals and grievances from stakeholders, and disclosed their contact information near construction sites.

### **9.1 Scope of Appeals**

The scope of appeals includes without limitation:

1. Noise pollution caused by vehicles and machinery;
2. Air pollution caused by construction;
3. Water pollution caused by all types of waste;
4. Use of productive land for material transport or storage without authorization;
5. Issues related to LA compensation, including land measurement and compensation calculation; and
6. Damages to cultural resources out of the project area

### **9.2 Appeal Modes**

The appeal modes include:

1. Letter or e-mail;
2. Telephone, where all telephone appeals shall be recorded and submitted to the grievance redress team;
3. Oral, where all oral appeals shall be submitted to the grievance redress team in writing;

The above appeal modes have been disclosed to the APs, and mass media utilized to strengthen publicity and reportage to make the APs full aware of their appeal right.

### **9.3 Appeal Channels**

Open appeal channels have been established for the Project, including village

committees, township governments, county complaint handling offices, courts, etc. in order to address issues arising from the Project timely and effectively, and protect the APs' lawful rights and interests. The appeal procedure is as follows:

1. If an AP is dissatisfied with the compensation and resettlement program, he/she may file an appeal with the village committee (an oral appeal shall be recorded), which should make a disposition within two weeks;

2. If the AP is dissatisfied with the disposition of the village committee, he/she may file an appeal with the township government (an oral appeal shall be recorded), which should make a disposition within two weeks;

3. If the AP is dissatisfied with the disposition of the township government, he/she may file an appeal with the district / county complaint handling office (an oral appeal shall be recorded), which should make a disposition within two weeks;

4. If the AP is dissatisfied with the disposition of the district / county complaint handling office, he/she may bring a suit in a civil court in accordance with the Civil Procedure Law.

An AP may also file an appeal directly with the AIIB project team.

## **10. Resettlement Implementation Schedule**

According to the project schedule, the Project will break ground in October 2019, and be completed and ready for connection to the receiving station in May 2022.

The compensation and resettlement work of the Project will begin in September 2019, and end in February 2022. The basic principles of scheduling are as follows: The starting time of compensation for temporary land occupation and LA should be based on the progress of construction and land approval progress, and completed within one month before land use; sufficient time should be allowed for LA compensation before the commencement of construction; production and income restoration should be completed before the Project is put into operation.

### **10.1 Preparatory Work**

#### 1) Defining the LA range

Define the LA range based on the project design and layout, and notify LA matters to the affected village committees.

#### 2) DMS

The district / county natural resources and planning bureaus assign staff to conduct a DMS in the affected villages, and keep detailed records.

#### 3) Preparing an RAP and a budget

The RAP will be updated based on the detailed design and DMS results, and submitted to AIIB for approval.

#### 4) Contract signing

LA compensation agreements are signed with the affected villages, and the district / county finance bureaus pay compensation.

### **10.2 Resettlement Implementation**

The compensation for LA and attachments will be disbursed by the district / county natural resources and planning bureaus to the affected village committees, and then paid to the AHs via banks.

The PMO is responsible for internal monitoring, and will submit an internal monitoring report to AIIB quarterly.

The PMO will appoint an external M&E agency, which will submit an external M&E report to AIIB semiannually.

### 10.3 Implementation Schedule

Compensation and resettlement will be conducted based on construction progress, as detailed in Table 10-1.

**Table 10- 1 Resettlement implementation Schedule**

No.	Task	Indicator	Agency concerned	Deadline
<b>1</b>	<b>Information disclosure</b>			
1.1	RAP disclosure	Affected townships	IA	2019.9
1.2	RAP disclosure	Affected villages and households	IA	2019.9
<b>2</b>	<b>RAP updating</b>			
2.1	DMS		IA	2019.10
2.2	Updating the RAP based on the DMS		IA	2019.12
2.3	Approving the RAP and budget		District / county governments	2019.12
2.4	Disclosing the updated RAP	Affected villages and households	IA	2019.12
<b>3</b>	<b>Signing compensation agreements</b>			
3.1	Village level		IA	2019.12
3.2	Household level		IA, village committees	2019.12
<b>4</b>	<b>Compensation</b>			
4.1	Disbursing compensation to affected village committees		District / county natural resources and planning bureaus	2020.1
4.2	paying compensation to AHs	All AHs	Village committees	2020.1
<b>5</b>	<b>M&amp;E</b>			
5.1	Baseline survey		External M&E agency	2019.12
5.2	Establishing an internal M&E mechanism	Based on the RAP	IA	2019.12
5.3	Signing a contract with the external M&E agency	Based on the RAP	IA	2019.12
5.4	Internal M&E reporting	Submitted quarterly	IA	2020.6
5.5	External M&E reporting	Submitted semiannually	External M&E agency	2020.6
5.6	Completion report	One report	IA	2022.3

## **11.M&E**

In order to ensure the successful implementation of the RAP, the Project will monitor the whole process of compensation and resettlement. Monitoring is divided into internal and external monitoring.

### **11.1 Internal Monitoring**

#### **11.1.1 Purpose and Tasks**

The purpose of internal monitoring is to ensure that all resettlement agencies function properly during RAP implementation, the lawful rights and interests of the APs are not affected, and the Project is constructed smoothly.

#### **11.1.2 Agencies and Staff**

The PMO is responsible for internal monitoring. The PMO staff has participated in RAP preparation, and will conduct internal monitoring with its implementation.

#### **11.1.3 Scope**

Internal monitoring covers the following:

- 1) Implementation of the policies specified in the RAP;
- 2) Grievances and appeals of the APs;
- 3) Participation and consultation of the APs during RAP implementation;
- 4) Support for vulnerable groups;
- 5) Operation of resettlement agencies

#### **11.1.4 Implementation Procedure**

The PMO practices an internal monitoring mechanism to check resettlement activities.

The PMO has established a basic compensation and resettlement database, and monitors the whole process of resettlement preparation and implementation.

During implementation, all resettlement agencies will establish a resettlement database, update it dynamically, and report resettlement activities and progress to higher agencies level by level timely to maintain continuous monitoring.

In the above mechanism, information forms in specified formats will be prepared to realize a continuous information flow from the village level to the PMO. The project leading group will conduct regular inspection and verification.

## **11.2 External Monitoring**

### **11.2.1 Purpose and Tasks**

External M&E is conducted by an independent agency on compensation and resettlement activities to see if the resettlement objectives are met, give comments and suggestions on the resettlement process, and the restoration of the APs' production level and living standard, and establish an early warning system.

### **11.2.2 M&E Indicators**

- 1) Progress: LA compensation preparation and implementation, resettlement, livelihood restoration, etc.;
- 2) Quality: satisfaction of the APs during compensation, etc.;
- 3) Funds: disbursement and use of compensation, etc.;
- 4) Resettlement: financial status and production of AHs before and after LA

### **11.2.3 M&E Methods**

M&E is based on the baseline survey data of the external M&E agency, and conducted using the sampling survey and rapid appraisal methods.

The external M&E agency will also perform the following tasks:

#### **1) Baseline survey**

A comprehensive sampling baseline survey will be conducted on the APs to collect baseline data on production level and living standard by means of regular survey, random interview and field observation.

The questionnaire will cover indicators measuring production level and living standard. These indicators will be compared to reflect changes in production level and living standard truthfully.

#### **2) Public consultation**

The external M&E agency will attend township and village public consultation meetings to evaluate the effectiveness of public participation.

#### **3) Feedback**

The external M&E agency will visit township and village resettlement agencies regularly to collect comments, and give suggestions on improvement to make the resettlement process more effective.

#### **4) Other duties**

The external M&E agency will also monitor the following activities:

- ① Organizational setup;
- ② Compensation payment and amount;
- ③ Support for vulnerable groups;
- ④ Resettlement and livelihood restoration

#### 11.2.4 Implementation Procedure

- 1) Preparing the terms of reference of M&E
- 3) Preparing a survey outline, survey form and questionnaire;
- 4) Design of sampling survey plan;
- 4) Establishing an M&E information system;
- 5) Baseline survey;
  - Local socioeconomic survey;
  - Survey on typical villages;
  - Survey on typical households;
  - Monitoring on resettlement agencies
- 6) Compiling M&E data and establishing a database;
- 7) Comparative analysis;
- 8) Preparing M&E reports

#### 11.3 Reporting Requirements

Internal monitoring reports will be submitted to AIIB quarterly, and external M&E reports submitted to the IA and AIIB semiannually until the completion of resettlement. A summary report will be submitted to AIIB after the completion of resettlement..

**Table 11- 1 Resettlement M&E Schedule**

No.	Report	Date
1	Baseline socioeconomic survey report	Dec. 2019
2	Monitoring report (No.1)	Jun. 2020
3	Monitoring report (No.2)	Dec. 2020
4	Evaluation report (No.1)	Jun. 2021
5	Evaluation report (No.2)	Dec. 2021
6	Summary report	Mar. 2022

## **12. Entitlement Matrix**

The impacts of the Project have been determined preliminarily, and the compensation rates and resettlement measures have been developed in consultation with the affected village committees and APs. The following entitlement matrix can be used as a basis for compensation payment.



Table 12- 1 Entitlement Matrix

Type of impact	Province / municipality	District / county	Village / township	AHs	Impacts	Compensation rate	Compensation and resettlement
Permanent LA	Tianjin	Wuqing District	Yijie Village, Wangqingtu Town	2 households with 8 persons	1.52 mu of cultivated land and woodland, 0.11 mu of irrigation and road land	29,000 yuan/mu	<p>1. <b>Cash compensation:</b> For households affected partly by LA, 20% of the land compensation will belong to the collective economic organization and the remaining 80% to each AH.</p> <p>2. <b>Social security:</b> LEFs eligible under the Interim Measures for Social Security for Land-expropriated Farmers of Tianjin Municipality may also be subject to social security. In 2018, the annual contribution to basic endowment insurance for urban and rural residents was 8,030 yuan; an LEF may pay premiums for 15 years at a time, namely 120,450 yuan to get insured. This sum will be paid by the client out of location-based prices for acquired land.</p> <p>If an LEF has not attained the statutory working age, the resettlement subsidy will be paid at a time.</p>
		Xiqing District	Xiaxinkou Village, Xinkou Town	3 households with 11 persons	2.53 mu of cultivated land	83,000 yuan/mu	
		Binhai New District	Changliuzhuang Village, Zhongtang Town	3 households with 10 persons	2.53 mu of cultivated land woodland, 0.66 mu of irrigation and road land	40,000 yuan/mu	
		Jinghai District	Dongshang Dock Village, Daqiuzhuang Town	5 households with 18 persons	12.74 mu of cultivated land woodland, 3.25 mu of irrigation and road land	34,000 yuan/mu	
			Guankeng Village, Daqiuzhuang Town		0.19 mu of irrigation and road land	34,000 yuan/mu	
			Hexin Village, Xizhaizhuang Town	7 households with 21 persons	20.58 mu of cultivated land and woodland, 2.8 mu of irrigation and road land	28,000 yuan/mu	
			Liujiaying Village, Duliu Town	3 households with 9 persons	2.53 mu of irrigation and road land	28,000 yuan/mu	
			Tancun Village, Chenguantun Town	2 households with 7 persons	1.56 mu of cultivated land and woodland, 0.27 mu of irrigation and road land	28,000 yuan/mu	
	Hebei	Guangyang District	Fashang Village, Jiuzhou Town	3 households with 11 persons	2.66 mu of cultivated land	115,000 yuan/mu	

		Yongqing County	Jiaozhuang Village, Bieguzhuang Town	3 households with 13 persons	2.61 mu of cultivated land	79,000 yuan/mu	<p>of the land compensation will belong to the collective economic organization and the remaining 80% to each AH;</p> <p>2. <b>Social security:</b> LEFs with per capita farmland insufficient to support basic livelihoods will be insured, and their premiums will be otherwise paid by the client at 25% of the location-based price for acquired land.</p> <p>If an LEF has not attained the statutory working age, the resettlement subsidy will be paid at a time.</p>
			Nanrenying Village, Bieguzhuang Town	4 households with 18 persons	10.17 mu of cultivated land	79,000 yuan/mu	
		Anci District	Xiaocixiang Village, Yangshuiwu Xiang	6 households with 25 persons	17.97 mu of cultivated land	99,000 yuan/mu	
			Zhongmazhuang Village, Diaohetou Xiang	7 households with 29 persons	17.41 mu of cultivated land	74,000 yuan/mu	
			Donggugangsi Village, Donggugang Town	3 households with 12 persons	2.6 mu of cultivated land	74,000 yuan/mu	
			Nandi Village, Geyucheng Town	3 households with 11 persons	2.58 mu of cultivated land	74,000 yuan/mu	
		Temporary land occupation	Tianjin	3 districts	15 townships / sub-districts, 55 villages	4,947 households with 15,476 persons	
Hebei	3 townships		7 townships, 37 villages	3,802 households with 11,674 persons	3,203.85	2,000 yuan/mu 24,000 yuan/mu	
Beijing	1 township		1 township, 1 village	2 households with 7 persons	0.78 mu	4,000 yuan/mu 60,000 yuan/mu	

Non-residential properties	Tianjin	2 districts	6 townships, 9 villages	Village collectives	38,900 m <sup>2</sup>	420 yuan/m <sup>2</sup>	Paying compensation to proprietors or users based on the specified rates
	Hebei	1 district	1 town, 1 village	Village collectives	2,500 m <sup>2</sup>		
	Beijing	1 district	1 town, 1 village	Village collectives	500 m <sup>2</sup>		
Greenhouses	Tianjin	1 district	3 towns, 4 villages	113 households	113 greenhouses, 113,000 m <sup>2</sup>	65 yuan/m <sup>2</sup>	Paying compensation to AHs based on the specified rates
	Hebei	2 districts	2 towns, 7 villages	162 households	162 greenhouses, 162,000 m <sup>2</sup>		
Tombs	Tianjin	3 districts	11 towns, 16 villages	27 households	27 tombs	3,000 yuan each	Paying compensation to AHs based on the specified rates
	Hebei	3 townships	6 towns, 16 villages	30 households	30 tombs	3,000 yuan each	Paying compensation to AHs based on the specified rates
	Beijing	1 district	1 town, 1 village	25 households	25 tombs	12,000 yuan each	Paying compensation to AHs based on the specified rates
Telegraph poles	Tianjin	3 districts	12 townships, 25 villages	Village collectives	75 telegraph poles	2,800 yuan each	Paying compensation to proprietors based on the specified rates
	Hebei	3 townships	7 townships, 21 villages	Village collectives	45 telegraph poles		
Seedlings	93 villages / entities in 23 townships / sub-districts in 8 townships in 3 provinces / municipalities				294,583 poplars, willows and locust trees	27.5-950 yuan	The numbers of seedlings and fruit trees are based on the affected woodland and garden land, and the industrial regulations, and compensation will be based on actual impacts and specified rates.
Fruit trees	82 villages in 21 townships / sub-districts in 8 townships in 3 provinces / municipalities				164,446 apple, peach and plum trees, and 247,410 grape trees	17.5-925 yuan	

