Report and Recommendation of the President to the Board of Directors

Project Number: 49021-002
November 2017

Proposed Loan and Technical Assistance Grant
People’s Republic of China: Heilongjiang Green Urban and Economic Revitalization Project

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Asian Development Bank
CURRENCY EQUIVALENTS
(as of 14 November 2017)

Currency unit – yuan (CNY)
CNY1.00 = $0.1505
$1.00 = CNY6.6452

ABBREVIATIONS

ADB – Asian Development Bank
BDS – business development services
EIB – European Investment Bank
ESMS – environmental and social management system
FIC – financial intermediation component
HBC – Harbin Bank Corporation
HPG – Heilongjiang Provincial Government
LBC – Longjiang Bank Corporation
PAM – project administration manual
PIU – project implementation unit
PMO – project management office
PRC – People’s Republic of China
SMEs – small- and medium-sized enterprises
SPS – Safeguard Policy Statement
TA – technical assistance
WWTP – wastewater treatment plant

NOTE

In this report, “$” refers to United States dollars.
In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT AT A GLANCE</td>
<td></td>
</tr>
<tr>
<td>MAPS</td>
<td></td>
</tr>
<tr>
<td>I. THE PROPOSAL</td>
<td>1</td>
</tr>
<tr>
<td>II. THE PROJECT</td>
<td>1</td>
</tr>
<tr>
<td>A. Rationale</td>
<td>1</td>
</tr>
<tr>
<td>B. Impact and Outcome</td>
<td>3</td>
</tr>
<tr>
<td>C. Outputs</td>
<td>3</td>
</tr>
<tr>
<td>D. Summary Cost Estimates and Financing Plan</td>
<td>4</td>
</tr>
<tr>
<td>E. Implementation Arrangements</td>
<td>6</td>
</tr>
<tr>
<td>III. ATTACHED TECHNICAL ASSISTANCE</td>
<td>7</td>
</tr>
<tr>
<td>IV. DUE DILIGENCE</td>
<td>7</td>
</tr>
<tr>
<td>A. Technical</td>
<td>7</td>
</tr>
<tr>
<td>B. Economic and Financial</td>
<td>8</td>
</tr>
<tr>
<td>C. Governance</td>
<td>9</td>
</tr>
<tr>
<td>D. Poverty, Social, and Gender</td>
<td>9</td>
</tr>
<tr>
<td>E. Safeguards</td>
<td>9</td>
</tr>
<tr>
<td>F. Summary of Risk Assessment and Risk Management Plan</td>
<td>10</td>
</tr>
<tr>
<td>V. ASSURANCES AND CONDITIONS</td>
<td>11</td>
</tr>
<tr>
<td>VI. RECOMMENDATION</td>
<td>11</td>
</tr>
<tr>
<td>APPENDIXES</td>
<td></td>
</tr>
<tr>
<td>1. Design and Monitoring Framework</td>
<td>12</td>
</tr>
<tr>
<td>2. List of Linked Documents</td>
<td>15</td>
</tr>
</tbody>
</table>
### Project Classification Information Status: Complete

#### PROJECT AT A GLANCE

1. **Basic Data**
   - **Project Number:** 49021-002
   - **Project Name:** Heilongjiang Green Urban and Economic Revitalization Project
   - **Country:** China, People’s Republic of
   - **Borrower:** Ministry of Finance
   - **Department/Division:** EARD/EASS
   - **Executing Agency:** Heilongjiang Provincial Government

2. **Sector**
   - **Agriculture, natural resources and rural development**
     - Finance
     - Industry and trade
     - Transport
     - Water and other urban infrastructure and services
       - Subsector(s): Land-based natural resources management

3. **Strategic Agenda**
   - **Subcomponents**
     - Inclusive economic growth (IEG)
     - Environmentally sustainable growth (ESG)
   - **Climate Change Information**
     - Adaptation ($ million)
     - Mitigation ($ million)
     - CO₂ reduction (tons per annum)
     - Climate Change impact on the Project

4. **Drivers of Change**
   - **Components**
     - Governance and capacity development (GCD)
     - Knowledge solutions (KNS)
     - Partnerships (PAR)
     - Private sector development (PSD)
   - **Gender Equity and Mainstreaming**
     - Effective gender mainstreaming (EGM)

5. **Poverty and SDG Targeting**
   - **Location Impact**
     - Geographic Targeting: No
     - Household Targeting: No
     - SDG Targeting: Yes
     - SDG Goals: SDG6, SDG8, SDG9, SDG11

6. **Risk Categorization**
   - Environment: A
   - Involuntary Resettlement: A
   - Indigenous Peoples: C

7. **Financing**
   - **Modality and Sources**
     - ADB
     - Cofinancing
     - Counterpart
     - Total
   - **Amount ($ million)**
     - ADB: 310.00
     - Cofinancing: 220.00
     - Counterpart: 491.00
     - Total: 1,021.00

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**Note:** An attached technical assistance will be financed on a grant basis by the Technical Assistance Special Fund (TASF-OTHERS) in the amount of $450,000; Financial Sector Development Partnership Special Fund in the amount of $300,000.
HEILONGJIANG GREEN URBAN AND ECONOMIC REVITALIZATION PROJECT IN THE PEOPLE'S REPUBLIC OF CHINA

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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People’s Republic of China (PRC) for the Heilongjiang Green Urban and Economic Revitalization Project. The report also describes proposed technical assistance (TA) for Heilongjiang Business Development Services Support to Strengthen Financial Intermediation Component Implementation, and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, approve the TA.

2. The project is timely and essential to provide strategic and comprehensive multicity support to non-coal diversification aiming at economic revitalization and improving urban living conditions through two types of components: (i) financial intermediation component (FIC) which is linked to a business development services (BDS) subcomponent to strengthen the capacity of small- and medium-sized enterprises (SMEs) and enable private sector development; and (ii) investment project components to clean up the environment from coal-mining impact, and improve urban infrastructure and public services for people in the coal-dependent cities of Hegang, Jixi, Qitaihe, and Shuangyashan (project cities) in eastern Heilongjiang Province in northeastern PRC. The Asian Development Bank (ADB) provided TA to prepare the project.

II. THE PROJECT

A. Rationale

3. The project cities share a border with the Russian Federation to the east and to the north, and have a combined population of 5.2 million. They were important bases for coal-mining and electricity production in the PRC particularly between 1949 and 2013. Their fundamental reliance on coal mining and related industries made their economies vulnerable, especially when coal prices dropped steeply in 2013. Changing global and domestic energy and climate change policies also contributed to rapid economic decline, wage reductions, unemployment, urban poverty, and population loss in the project cities. In 2014, the project cities had a per capita gross domestic product that was 33% lower than the average rate in Heilongjiang Province, which in turn was 16% below the national average. Economic revitalization is challenging because of the lack of (i) effective programs for SME development, (ii) SME financing for investments and longer-term working capital, (iii) investments in competitive products and research and development, (iv) capacity to develop and expand businesses, (v) strategic workforce development, and (vi) attractive urban environments and services. A further challenge to strengthening the private sector is a long tradition of large state-owned enterprises dominating the local economies.

4. The project cities suffer from environmental degradation (pollution of soil, water, and air) caused by more than 60 years of coal mining. This, along with inadequate urban infrastructure and services—e.g., water supply, wastewater management, drainage, and district heating systems—makes for poor livability. Key missing links in the road network lead to detours and traffic congestion, especially in Shuangyashan. Project cities lack adequate road maintenance, public transport, bus lanes, bus stops, and sidewalks; and urgently need road rehabilitation. Some
rivers, especially in Hegang and Jixi, flood during heavy storms, have narrow channels, and are polluted by sediments and untreated discharge of domestic and industrial wastewater.

5. **Value added by Asian Development Bank assistance.** ADB helped identify and comprehensively address key economic development challenges through non-coal diversification, and sustainable and inclusive private sector development and job creation. It mobilized cofinancing to tackle public funding shortages, enabling a holistic investment project that will generate cross-sector synergies. It prepared a diversification road map and an SME development and financing program to leverage ADB funds and strengthen the local finance sector.\(^7\) It prepared initial mining remediation strategies and identified pilot projects to improve the environment and public health, and initiate a transformation from a negative image as dirty coal cities to clean and green cities. ADB identified key needs for urban infrastructure and services improvement, to help retain and attract people, companies, and jobs. ADB assessed climate risk and vulnerability, and proposed adaptation measures to help make the project cities more resilient to climate change.

6. **Strategic fit.** The project builds on more than 20 years of partnership between ADB and Heilongjiang Province, including several strategic priority projects, such as, reducing pollution and flood risk in the Songhua River Basin involving both public and private sectors support.\(^8\) The project is part of a renewed commitment to support government strategies to revitalize the PRC’s economically challenged northeastern region. Through its strategic and holistic approach, the project will support the (i) Thirteenth Five-Year plans of the governments of the PRC, Heilongjiang Province, and project cities to transform the economy and improve financing of new industries and SMEs;\(^10\) (ii) Transformation Development Planning of Coal Cities in Heilongjiang Province, 2014–2020 by assisting SMEs in non-coal pillar industries, including green food processing, graphite high-tech materials and products, machinery, tourism, trade, and logistics; and (iii) National New-Type Urbanization Plan, 2014–2020 by strengthening small- and medium-sized cities.\(^11\) The project aligns with ADB policies, including the (i) Midterm Review of Strategy 2020, through knowledge provision, support for the development of the private and finance sectors, and increased partnership-based cofinancing and operations;\(^12\) (ii) country partnership strategy for the PRC, 2016–2020, by supporting socially inclusive, environmentally sustainable, and economically competitive urban development;\(^13\) and (iii) urban, water, and finance sector and sustainable transport initiative operational plans; and environment operational directions.\(^14\)

\(^7\) Finance sector development includes (i) developing the capacity of local commercial financial intermediaries in green financing, (ii) facilitating medium- to longer-term SME project financing and reducing collateral requirements, and (iii) strengthening capacity in cash-flow-based lending and risk management for SMEs.
B. **Impact and Outcome**

7. The project is aligned with the following impacts: (i) economy revitalized and diversified, and non-coal industries in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan developed (footnote 9); and (ii) living environment, safety, and public health in cities of Hegang, Jixi, Qitaihe, and Shuangyashan improved (footnote 10). The project will have the following outcome: non-coal economic activities and urban livability in project cities increased.

8. Through its comprehensive urban and economic revitalization approach, the project is expected to help stop and reverse the out-migration of younger qualified workforce, and draw and retain residents and companies to more attractive project cities. The project will directly benefit 2.73 million urban residents through (i) stronger SME competitiveness and jobs creation in improved non-coal industrial parks; (ii) improved environment and public image through mining remediation; (iii) improved water supply, sewerage, district heating, flood protection, roads, road safety, and public transport; (iv) greater environmental and traffic safety awareness through public education programs; and (v) increased cooperation between project cities in tourism promotion, logistics and trade, supply chain integration, and SME support using smart city applications.

C. **Outputs**

9. The project will have five outputs. Detailed descriptions are included in the design and monitoring framework (Appendix 1) and in the project administration manuals (PAMs).15

10. **Output 1: Capacity in business development services and integrated project planning and management developed.** This output will support project management and capacity development to ensure successful diversification and project sustainability in areas of (i) project planning, procurement, and financial management; (ii) BDS for SMEs and local SME bureaus; (iii) human resources and skills development; (iv) smart city cluster cooperation; (v) mining remediation planning and implementation; (vi) flood risk management, climate resilience, and sponge city planning;16 (vii) water, wastewater, and drainage system design, construction, and operation; and (viii) sustainable urban and public transport management and road safety.

11. **Output 2: Sustainable small- and medium-sized enterprises investment and access to finance in project cities improved.** The project will establish an SME financing platform, using the FIC, to mobilize domestic financing.17 The platform will offer (i) cofinancing loans for SME investments by financial intermediaries in which the ADB loan component is subordinated in return for longer-term project loans, (ii) a first-loss cash collateral facility to mobilize commercial guarantees and ease access to commercial financing for investments and longer-term working capital of up to 3 years, and (iii) entrusted loans for high-priority projects for local governments. The FIC will be linked to the BDS subcomponent (output 1).

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15 Project Administration Manual: Investment Project Components (Section A) [PAM (Section A)], and Project Administration Manual: Financial Intermediation Component and Business Development Services Subcomponent (Section B) [PAM (Section B)] (accessible from the list of linked documents in Appendix 2).

16 Sponge city is a concept of comprehensive urban water resources management, in which greenways, parks, and wetlands maximize ecosystem services, including stormwater management, using ecosystems-based adaptation.

17 Output 2 will be implemented through subprojects by SMEs, selected according to criteria described in PAM (Section B). The financial intermediation modality is most appropriate for aggregate projects facilitating diversification to non-coal industries through SMEs, for which financing requirements are not large enough to allow direct lending by ADB. The cash collateral facility will cover (i) first loss of 20% for a guarantee company to assume risk for 80% of SME loan exposure and thus facilitate longer-term (3–5 years) debt financing by local financial intermediaries, and (ii) straight loans for higher-risk project loans in priority sectors.
12. **Output 3**: Key infrastructure and small- and medium-sized enterprises facilities in non-coal industrial parks in project cities constructed. The project will build and make operational key infrastructure and facilities, including (i) roads with advanced safety features and associated utility pipes; (ii) industrial wastewater treatment plants (WWTPs); and (iii) multifunction facilities for SMEs and start-ups, as well as for training and business services.

13. **Output 4**: Remediation and environmental cleanup from mining impacts in project cities improved. The project will develop mining remediation strategies, prepare investment plans, and implement pilot demonstration projects as models for replication. In Hegang, an open-pit mine will be remediated involving grading, clay lining, topsoil cover, vegetation, environmental management, and monitoring. The site will be reclaimed, made accessible and reused as a park and for light industry. In Jixi, a former mining area and waste-rock dumpsite, will be afforested, and a subsidence monitoring center will be built and operated. In Qitaihe and Shuangyashan, waste-rock dumpsites and subsidence areas will be remediated and reused as open spaces.

14. **Output 5**: Integrated urban infrastructure and services in project cities improved. This output will enhance urban livability and attractiveness through improved, spatially integrated infrastructure and services: (i) Hegang—river rehabilitation, drainage system, sustainable urban and public transport, urban greening, and district heating; (ii) Jixi—integrated improvements to the core area of Hengshan District and West Jixi, including river rehabilitation, urban roads, water supply, wastewater management, and drainage system; (iii) Qitaihe—water supply, wastewater system, and public transport system improvements; and (iv) Shuangyashan—sustainable urban transport by building key missing road links, water supply, sewerage, and drainage systems.

D. Summary Cost Estimates and Financing Plan

15. The project is estimated to cost $1,021.0 million equivalent (Table 1). Detailed cost estimates by expenditure category and by financier are included in the PAMs. The major expenditure items are civil works, equipment and its installation, FIC, and consulting services.

16. The government has requested a regular loan of $310 million from ADB’s ordinary capital resources to help finance the project. The loan will have a 25-year term, including a grace period of 5 years; an annual interest rate determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and such other terms and conditions set forth in the draft loan and project agreements. Based on the custom-tailored repayment method, the average maturity is 15.20 years, and the maturity premium payable to ADB is 0.10% per year.

17. The summary financing plan is in Table 2. ADB will finance the expenditures in relation to civil works, equipment and its installation, capacity building, and project management. The European Investment Bank (EIB) will provide loan cofinancing equivalent to $220 million not administered by ADB. EIB will cofinance the expenditures in relation to civil works, and equipment and its installation for outputs 4 and 5.

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19 Subsidence is lateral or vertical ground movement and failure caused by the underground coal mines.
20 EIB cofinancing will be on a joint collaborative basis and not administered by ADB. However, EIB will contribute to the financing of the same components and contracts as ADB. The exact amount of EIB cofinancing is still to be finalized at their Board meeting, expected later in December 2017. However, the total amount of financing will be sufficient to implement the project as described.
Table 1: Summary Cost Estimates
($ million)

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Investment Project Components—Base Cost</strong></td>
<td></td>
</tr>
<tr>
<td>1. Output 1: Capacity in BDS and integrated project planning and management developed</td>
<td>14.3</td>
</tr>
<tr>
<td>2. Output 3: Key infrastructure and SME facilities in non-coal industrial parks constructed</td>
<td>144.0</td>
</tr>
<tr>
<td>3. Output 4: Remediation and environmental cleanup from mining impacts improved</td>
<td>23.9</td>
</tr>
<tr>
<td>4. Output 5: Integrated urban infrastructure and services improved</td>
<td>504.8</td>
</tr>
<tr>
<td><strong>Subtotal (A)</strong></td>
<td>687.0</td>
</tr>
<tr>
<td><strong>B. Financial Intermediation Component</strong></td>
<td></td>
</tr>
<tr>
<td>1. Output 2: Sustainable SME investment and access to finance improved</td>
<td></td>
</tr>
<tr>
<td>(i) Subprojects through cofinancing loans</td>
<td>48.0</td>
</tr>
<tr>
<td>(ii) Subprojects through cash collateral facility</td>
<td>160.0</td>
</tr>
<tr>
<td>(iii) Subprojects through entrusted loans</td>
<td>24.0</td>
</tr>
<tr>
<td><strong>Subtotal (B)</strong></td>
<td>232.0</td>
</tr>
<tr>
<td><strong>C. Contingencies</strong></td>
<td>71.6</td>
</tr>
<tr>
<td><strong>D. Financial Charges During Implementation</strong></td>
<td>30.4</td>
</tr>
<tr>
<td><strong>Total (A+B+C+D)</strong></td>
<td>1,021.0</td>
</tr>
</tbody>
</table>

BDS = business development services, SMEs = small- and medium-sized enterprises.
a Includes taxes and duties of $28.96 million. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of $4.89 million through cash contribution.
b In mid-2016 prices as of 23 April 2017.
c Physical contingencies computed at 4.00% for civil works, field research and development, training, surveys, and studies. Price contingencies computed at an average of 1.48% on foreign exchange costs and 2.28% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate. No contingencies are included for the financial intermediation component.
d Includes interest and commitment charges capitalized under the ADB loan and not for the European Investment Bank loan. Interest during construction for the OCR loan has been computed at the 5-year United States dollar fixed swap rate plus an effective contractual spread of 0.50% and maturity premium of 0.10%. Commitment charges for the OCR loan are 0.15% per year to be charged on the undisbursed loan amount.
Source: Asian Development Bank estimates.

Table 2: Summary Financing Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($ million)</th>
<th>Share of Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Investment Project Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ADB: ordinary capital resources (regular loan)</td>
<td>254.0</td>
<td>24.9</td>
</tr>
<tr>
<td>2. EIB loan</td>
<td>220.0</td>
<td>21.5</td>
</tr>
<tr>
<td>3. Government</td>
<td>315.0</td>
<td>30.9</td>
</tr>
<tr>
<td><strong>Subtotal (A)</strong></td>
<td>789.0</td>
<td>77.3</td>
</tr>
<tr>
<td><strong>B. Financial Intermediation Component</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ADB: ordinary capital resources (regular loan)</td>
<td>56.0</td>
<td>5.5</td>
</tr>
<tr>
<td>2. Domestic commercial banks</td>
<td>106.4</td>
<td>10.4</td>
</tr>
<tr>
<td>3. Subborrowers</td>
<td>69.6</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Subtotal (B)</strong></td>
<td>232.0</td>
<td>22.7</td>
</tr>
<tr>
<td><strong>Total (A+B)</strong></td>
<td>1,021.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** ADB estimates.

ADB = Asian Development Bank, EIB = European Investment Bank.
a The overall ADB–EIB and ADB loan amounts for the investment loan are distributed as follows: (i) Hegang—$175.00 million (ADB: $93.91 million), (ii) Jixi—$95.00 million (ADB: $71.80 million), (iii) Qitaihe—$125.00 million (ADB: $39.54 million), and (iv) Shuangyashan—$135.00 million (ADB: $104.75 million). These include the following amounts for the financial intermediation component: (i) Hegang—$20.00 million, (ii) Jixi—$8.00 million, (iii) Qitaihe—$13.00 million, and (iv) Shuangyashan—$15.00 million.
b Subject to approval. EIB loan amounts are distributed as follows: (i) Hegang—$81.09 million, (ii) Jixi—$23.20 million, (iii) Qitaihe—$85.46 million, and (iv) Shuangyashan—$30.25 million. EIB is considering to provide a grant that would not be administered by ADB and would support the project outcome.
c Municipal government financing comprises: (i) $73.50 million from Hegang, (ii) $65.70 million from Jixi, (iii) $94.30 million from Qitaihe, and (iv) $81.50 million from Shuangyashan.
d Cofinancing and subborrower counterpart contributions are estimated based on a 70:30 debt–equity structure and agreed cofinancing ratios with the financial intermediaries for the three financial products.
Source: ADB estimates.
18. The SME financing platform, through the $56.0 million FIC, is estimated to leverage $162.4 million in cofinancing and counterpart funding from financial intermediaries and other commercial banks for the first batch of subprojects. Subloan terms are expected to be 3–5 years. After the first batch is repaid, the loan proceeds will be relented to another batch and revolved, with a total estimated leverage investment of $744.8 million over the 15-year FIC repayment period.

19. Climate mitigation is estimated to cost $148.6 million, and climate adaptation is estimated to cost $172.0 million. ADB will finance 27.4% of mitigation costs and 38.2% of adaptation costs. Details are in the PAMs. The project’s climate risk is \textit{medium}.

E. Implementation Arrangements

20. The Heilongjiang Provincial Government (HPG) is the executing agency and will supervise, coordinate, and manage the project. The Heilongjiang Finance Department will manage the imprest account and support financial management. The Hegang, Jixi, Qitaihe, and Shuangyashan municipal governments are the implementing agencies, and each has established (i) a project leading group headed by the mayor or vice mayor, (ii) a local project management office (PMO) under the municipal development and reform commission, and (iii) project implementation units (PIUs) in the participating local agencies to implement the subcomponents. For the FIC, the headquarters of Harbin Bank Corporation (HBC) and Longjiang Bank Corporation (LBC) will be the financial intermediaries for the project cities, and each bank has established PIUs.

21. The implementation arrangements are summarized in Table 3 and described in detail in the PAMs (footnote 13).

<table>
<thead>
<tr>
<th>Table 3: Implementation Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspects</strong></td>
</tr>
<tr>
<td>Implementation period</td>
</tr>
<tr>
<td>Estimated completion date</td>
</tr>
<tr>
<td>Estimated loan closing date</td>
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</tbody>
</table>

**Management**

(i) Oversight body: Heilongjiang PLG

(ii) Executing agency: HPG, under HDRC’s leadership and with HAD, HFD, and HIITC participation

(iii) Implementing agencies: HMG, JMG, QMG, and SMG each with a local PLG and PMO.

For the FIC, project cities have approval authority for and bear subprojects’ credit risks. A no-objection from ADB for the first subproject of each financial intermediary and guarantee company is required, and a free limit of CNY30 million was set for subsequent subprojects. Entrusted loans will be priced at 90% of the reference domestic commercial cofinancing loan.

(iv) Implementation units: Project cities’ concerned departments

(v) Financial intermediaries: The headquarters of Harbin Bank Corporation and Longjiang Bank Corporation will be responsible for subproject due diligence, rating, and approval, applying their standard credit approval processes and including ESMS implementation. Projects considered unsuitable for cofinancing will be passed to local guarantee companies for credit enhancement. If they refuse to guarantee subprojects despite the first-loss cash collateral, municipal governments may extend an entrusted loan, without cofinancing, of up to 30% of the total FIC amount for each city.

**Procurement**

For the FIC, subborrowers will use commercial practices acceptable to ADB for procurement using subloan proceeds. A procurement manual was prepared and included in the PAM (Section B) to guide the adoption of commercial practices to ensure consistency with ADB’s procurement principles.

<table>
<thead>
<tr>
<th>Procurement</th>
<th>Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>International competitive bidding</td>
<td>3 contracts, $84.14 million</td>
</tr>
<tr>
<td>National competitive bidding</td>
<td>27 contracts, $252.71 million</td>
</tr>
</tbody>
</table>
### Aspects and Arrangements

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Arrangements</th>
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<tbody>
<tr>
<td>Consulting services</td>
<td>QCBS (3 contracts) 964 person-months $13.99 million</td>
</tr>
<tr>
<td></td>
<td>CQS 24 person-months $0.18 million</td>
</tr>
<tr>
<td></td>
<td>ICS (6 contracts) 16 person-months $0.17 million</td>
</tr>
<tr>
<td>Retroactive financing and/or advance contracting</td>
<td>A goods contract for Hegang’s intelligent transport system (estimated at $1.45 million), and a civil works contract for Shuangyashan’s Xinxing Avenue link (estimated at $22.5 million) are proposed for advance contracting and retroactive financing. Consulting services are also included for consideration of advanced procurement. Subloan agreements may be signed for the FIC. Retroactive financing will be provided for ADB-approved subprojects for expenses incurred by subborrowers not more than 12 months prior to date of the loan agreement. Total retroactive financing will not exceed 20% of the loan amount.</td>
</tr>
<tr>
<td>Disbursement</td>
<td>The loan proceeds will be disbursed following ADB’s Loan Disbursement Handbook (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB, as per the PAMs.</td>
</tr>
</tbody>
</table>


Source: ADB.

### III. ATTACHED TECHNICAL ASSISTANCE

22. The TA will support capacity building as a further risk mitigation measure for implementation of the FIC during the implementation period of the loan.23 It will strengthen SMEs during subloan implementation to enhance credit repayment capacity and FIC sustainability. It will also strengthen the risk control capacities of financial intermediaries and support the implementation of an environmental and social management system (ESMS). Outputs are (i) SME performance and weaknesses identified during the subloan repayment period monitored, (ii) SME performance improvement action plan and capacity building plan developed, (iii) capacity of SMEs in implementing corrective measures improved, and (iv) capacity of financial intermediaries in implementing ESMS improved. ADB will administer the TA. The TA is estimated to cost $800,000, of which $450,000 will be financed on a grant basis by ADB’s Technical Assistance Special Fund (TASF-other sources), and $300,000 will be financed on a grant basis by the Financial Sector Development Partnership Special Fund.24 The government will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, and other in-kind contributions.

### IV. DUE DILIGENCE

A. Technical

23. The project is technically feasible and complies with the PRC’s and international engineering standards, local regulations and conditions, and strategic and sector priorities. Design options were compared and the best possible technologies with the least cost, environmental, and social impacts selected. Baseline data was collected and climate change adaptation measures by climate risk and vulnerability assessment specialists were incorporated.

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including structural measures like increasing the flow capacity of project rivers to reduce flood risks and nonstructural measures. The proposed capacity development is based on a needs assessment for the successful implementation and sustainable operation of project facilities.

24. The FIC will finance SME subprojects in the project cities, which will contribute to economic revitalization and diversification away from coal. Detailed subproject selection criteria, covering technical, financial, environmental, and social safeguards, were agreed with the implementing agencies. The project cities (with support of the financial intermediaries) must prepare an appraisal report to verify each subproject’s compliance with the defined selection criteria and obtain ADB’s no-objection before approving a subproject under the first batch. Detailed guidelines on subproject screening and appraisal are provided in the PAM (Section B).

B. Economic and Financial

25. Economic analysis. An economic analysis for all investment loan subcomponents was prepared following ADB guidelines. Economic viability of the overall project was confirmed under various sensitivity scenarios. Benefits considered include (i) improved water supply, wastewater management, and sanitation; (ii) improved flood protection and avoided damage; (iii) increased savings in vehicle operating costs and travel time; and (iv) improved public health with less productivity losses and reduced medical costs. Additional benefits include increased SME employment, reduced carbon emission from mining remediation, increased carbon sequestration from afforestation, and reduced exposure to pathogens. The economic internal rate of return was calculated at 15.4% (above the 9.0% economic opportunity cost of capital), which drops to 14.3% if the capital cost increases by 10.0%, 15.3% if the operating cost increases by 10.0%, 14.0% with a 10.0% benefit decrease, 12.8% when combining these assumptions, and 15.2% with a 1-year delay in the achievement of benefits.

26. Financial analysis. A financial analysis was carried out for all revenue-generating subcomponents, and the project is considered financially feasible. The financial internal rate of return was calculated in real terms at 3.67% for the Hegang WWTP, 3.72% for Hegang’s district heating, 3.27% for the Jixi WWTP, 8.46% for Jixi’s water supply, and 3.94% for Qitahei’s water supply. These rates exceed the weighted average costs of capital of 0.79% for the Hegang WWTP, 1.39% for Hegang’s district heating, 1.38% for the Jixi WWTP, 1.08% for Jixi’s water supply, and 1.64% for Qitahei’s water supply. The rates remain robust under various sensitivity scenarios. Fiscal analysis concluded that the project cities are likely to require support from the provincial government to meet shortfalls in counterpart contributions, as well as, for debt servicing and operation and maintenance of project facilities.

27. Due diligence. For the FIC, due diligence was conducted on financial institutions that will partner with the project cities, i.e., HBC, LBC, and Xinzheng Guarantee Company. The entities are financially viable and can meet financial obligations and debt service payments without difficulty. A debt sustainability assessment was conducted for the project cities, and the financial standing is assessed as sufficiently robust to absorb credit risks, and interest rate and exchange rate fluctuation risks. Integrity due diligence showed the entities complying with ADB’s integrity standards.


26 Detailed Financial Management Assessment: Financial Intermediation Component (accessible from the list of supplementary documents in Appendix 2).
C. Governance

28. The financial management risk is *moderate* because the PMOs and PIUs have limited experience with ADB-financed projects. This risk will be mitigated through project implementation support described in the risk management plan, summarized in Table 4. For the FIC, the overall risk is *moderate*. The assessment considered the capacity of the project cities, HBC, LBC, and Xinzheng Guarantee Company, including funds flow arrangements, staffing, accounting, financial reporting and information systems, and auditing. The result shows adequate financial management systems for project implementation. HBC and LBC comply with the regulations of the China Banking and Regulatory Commission. A risk mitigation action plan is provided in the PAMs.

29. The procurement risk is *moderate*. Given its experience with ADB projects, HPG will supervise the PIUs that currently lack experience. The procurement arrangement is deemed adequate, since a tendering agency and consultants under output 1 will provide support during implementation. For the FIC, procurement will use commercial practices acceptable to ADB and will follow ADB’s Procurement Guidelines (2015, as amended from time to time) on financial intermediation loans.

30. ADB’s Anticorruption Policy (1998, as amended to date) was explained to and discussed with HPG; the Hegang, Jixi, Qitaihe, and Shuangyashan municipal governments; HBC; LBC; and the Xinzheng Guarantee Company. The specific policy requirements and supplementary measures are described in the PAMs.

D. Poverty, Social, and Gender

31. The project will contribute to poverty reduction by supporting SME development and job creation, and by improving infrastructure and services, public health, sanitation, and living conditions. The project will create 1,853 skilled and 5,430 unskilled jobs during construction, and 398 skilled and 138 unskilled jobs during operation. The PMOs will prioritize vulnerable groups, such as women and the poor, for employment and training. A social and gender action plan was prepared to ensure that positive benefits of the project accrue to beneficiaries.

32. **Gender benefits.** The project is categorized *effective gender mainstreaming*. Women are affected by unemployment and poor urban services, and consider improvements in road safety and public transport as important benefits to their well-being and quality of life. The social and gender action plan will improve women’s employment opportunities, and provide consultation and participation opportunities. It will raise awareness on environmental protection, road safety, and flood risk management through public education. The FIC will provide loans to SMEs and start-up companies owned and/or managed by women. Social development and gender specialists will support project implementation.

E. Safeguards

33. In compliance with ADB’s Safeguard Policy Statement (SPS, 2009), the project’s safeguard categories are as follows.\(^\text{27}\)

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\(^{27}\) ADB. Safeguard Categories. https://www.adb.org/site/safeguards/safeguard-categories
34. **Environment (category A).** An environmental impact assessment and environmental management plan were prepared in compliance with the SPS, and disclosed on the ADB website on 22 May 2017.\(^{28}\) Overall, the project will generate positive impacts on the environment. Impacts during construction include earthworks and movement; and treatment of soil, polluted river sediment, and contaminated soil from coal processing. Construction will have temporary impacts on soil, surface water, air, and community safety but will not cause loss of valuable ecology or physical cultural resources. Impacts during operation include an increase in traffic on project roads. For some identified locations, noise levels may exceed the PRC standards. The environmental management plan includes measures to avoid and/or mitigate impacts during construction and operation, and deal with potential subsidence and leachate release at mining remediation sites.

35. **Involuntary resettlement (category A).** There were four resettlement plans prepared in line with the SPS, as well as, government laws and regulations on involuntary resettlement. About 318 households (1,075 persons) will be permanently affected by impacts on collective farm land (908.37 mu).\(^{29}\) Impacts on households and annual per capita income are found to be marginal with loss at no more than 10%. About 296 households (700 persons) will be affected by house demolition and relocation. About 6 organizations (1,530 workers) and 10 stores (32 persons) will be affected by impacts on structures. Impacts will be further investigated after detailed measurement surveys. Each PMO has designated resettlement staff and a grievance redress mechanism. The project implementation consultants will provide training and support.

36. **Indigenous peoples (category C).** Ethnic minorities account for less than 4% of the population in project cities. Due diligence confirmed that ethnic minorities will benefit equally from the project, and there will be no negative impact on indigenous peoples from the project.

37. An ESMS was established for the FIC, inclusive of subprojects classified *category B* and *category C* for the environment, involuntary resettlement, and indigenous peoples.

### F. Summary of Risk Assessment and Risk Management Plan

38. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.\(^{30}\)

<table>
<thead>
<tr>
<th>Risks</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPG has relatively weak lead and coordination role.</td>
<td>HDRC and HFD have committed to coordinate the project, along with four PMOs and with support from project implementation consultants.</td>
</tr>
<tr>
<td>PMO and PIU staff lack experience implementing ADB-financed projects, especially in financial management and procurement.</td>
<td>HPG and implementing agencies have committed to fulfill ADB’s requirements for procurement and financial management. The tendering agency and project implementation consultants will provide capacity development on procurement and financial management.</td>
</tr>
<tr>
<td>PMOs and PIUs experience frequent turnover of trained staff.</td>
<td>Project implementation consultants will provide training on ADB requirements at regular intervals.</td>
</tr>
<tr>
<td>PMOs and financial intermediaries lack experience in SME financing.</td>
<td>Project financing training on sample subprojects will be demonstrated by project start-up support and BDS consultants. The attached TA will support</td>
</tr>
</tbody>
</table>

\(^{28}\) The environmental impact assessment incorporates results from ADB and domestic reports, including consultant reports, domestic feasibility studies, domestic environmental impact assessments, and climate risk and vulnerability assessments. The domestic safeguards documents were prepared in compliance with the PRC Law on Environmental Impact Assessment (2016), the Technical Guidelines for Environmental Impact Assessment (HJ 2.1 -2016), and other PRC regulations and guidelines.

\(^{29}\) A *mu* is a Chinese unit of measurement for land area (1 mu = 666.67 square meters).

\(^{30}\) Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).
### Risks

| ESMS implementation, due diligence, investment appraisal, and on ADB requirements. |
| the financial intermediaries through ESMS implementation assistance and will carry out due diligence. The BDS and the TA will improve SMEs’ capacity to prepare, implement, and operate technically and financially sound proposals and projects. |

ADB = Asian Development Bank, BDS = business development services, ESMS = environmental and social management system, HDRC = Heilongjiang Development and Reform Commission, HFD = Heilongjiang Finance Department, HPG = Heilongjiang Provincial Government, PIU = project implementation unit, PMO = project management office, SMEs = small- and medium-sized enterprises, TA = technical assistance.

Source: ADB.

### V. ASSURANCES AND CONDITIONS

39. The government and HPG have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAMs and loan documents.

40. The government and HPG have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement and project agreement.

41. Disbursement of the loan for certain cost categories is conditional upon (i) execution of the EIB loan agreement, or (ii) execution of framework cooperation agreements with, and ESMS adoption by, concerned financial intermediaries.

### VI. RECOMMENDATION

42. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of $310,000,000 to the People’s Republic of China for the Heilongjiang Green Urban and Economic Revitalization Project, from ADB’s ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao
President
14 November 2017
## DESIGN AND MONITORING FRAMEWORK

### Impacts the Project is Aligned with

Economy revitalized and diversified, and non-coal industries in the cities of Hegang, Jixi, Qitaihe, and Shuangyashan developed (Heilongjiang Province’s Thirteenth Five-Year Plan)\(^a\)

Living environment, safety, and public health in cities of Hegang, Jixi, Qitaihe, and Shuangyashan improved (National New-Type Urbanization Plan, 2014–2020)\(^b\)

### Results Chain

<table>
<thead>
<tr>
<th>Performance Indicators with Targets and Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome</strong> Non-coal economic activities and urban livability in project cities increased</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By 2024 (baseline: 2016)</td>
<td>a–d. Annual reports of administrative departments in Hegang, Jixi, Qitaihe, and Shuangyashan cities; and project completion report</td>
<td>Limited success in attracting non-coal SMEs because the government reverses SME development policies</td>
</tr>
<tr>
<td>a. 2,000 person-year jobs(^c) created in non-coal industries (baseline: 0)</td>
<td></td>
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<tr>
<td>b. At least 15 non-coal SME projects in priority sectors implemented, of which at least 30% are women-led(^d) (baseline: 0)</td>
<td></td>
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<tr>
<td>c. Land area affected by risks from mining impact reduced by 188.7 ha (baseline: not applicable)</td>
<td></td>
<td></td>
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<tr>
<td>d. Urban residents’ rate of satisfaction with road, water supply, wastewater, and heating services increased to 60% (baseline: 42% [road], 25% [water supply], 12% [wastewater], and 20% [heating])</td>
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<td></td>
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<tr>
<td><strong>Outputs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Capacity in BDS and integrated project planning and management developed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By 2023 (baseline: 2016)</td>
<td>1a–1b. Project progress and completion reports; and training materials and knowledge products prepared by the consultants</td>
<td></td>
</tr>
<tr>
<td>1a. At least 400 individuals (at least 30% of them women) reported new skills in project management; labor force assessment and TVET; mining remediation engineering, strategic planning, and investment programming; smart city and city cluster cooperation and regional planning; flood risk management and sponge city design and investment planning; water, wastewater, and drainage management; tariff reform and nonrevenue water reduction; and/or sustainable urban transport and road and traffic safety awareness (baseline: 0)</td>
<td></td>
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<tr>
<td>1b. BDS capacity development training provided to SMEs, and at least 50 entrepreneurs (at least 30% of them women) reported improved skills in business planning (baseline: 0)</td>
<td></td>
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</tr>
<tr>
<td>2. Sustainable SME investment and access to finance in project cities improved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a. At least $232 million for SME investments in project cities provided (baseline: 0)</td>
<td>2a–2b. Project progress and completion reports; and annual audits by FIs</td>
<td>PMOs and FIs lack experience in SME financing, ESMS implementation, due diligence, investment appraisal, and on ADB requirements</td>
</tr>
<tr>
<td>2b. At least 30 entrepreneurs (30% of them women) have accessed finance (baseline: 0)</td>
<td></td>
<td></td>
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<tr>
<td>2c. At least 20 FI staff (30% of them women) report increased capacity on ESMS implementation (baseline: 0)</td>
<td>2c. Technical assistance progress reports</td>
<td></td>
</tr>
<tr>
<td>3. Key infrastructure and SME facilities in non-coal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a. 18.4 km of roads with associated utilities constructed (Hegang, 6.3 km; Jixi, 4.2 km; Qitaihe, 2.7 km; Shuangyashan, 6.2 km)</td>
<td>3a–3c. Project progress and completion reports</td>
<td>Delays in availability of counterpart</td>
</tr>
<tr>
<td>Results Chain</td>
<td>Performance Indicators with Targets and Baselines</td>
<td>Data Sources and Reporting Mechanisms</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>industrial parks in project cities constructed</td>
<td>Jixi, 4.3 km; Qitaihe, 2.1 km; and Shuangyashan, 5.7 km (baseline: 0)</td>
<td></td>
</tr>
<tr>
<td>3b. Two WWTPs in non-coal industrial parks constructed and operational with a combined capacity of 26,000 m³/d (Hegang: 6,000 m³/d; Jixi: 20,000 m³/d) (baseline: 0)</td>
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<tr>
<td>3c. At least 56,000 m² of multifunction SME facilities constructed and commissioned (baseline: 0)</td>
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<tr>
<td>4. Remediation and environmental cleanup from mining impacts in project cities improved</td>
<td>4. Mining remediation pilots in project cities implemented, including stabilization, soil cleanup, clay lining, soil cover, and afforestation on 188.7 ha (Hegang: 52.6 ha; Jixi: 89.7 ha; Qitaihe: 21.7 ha; Shuangyashan: 24.7 ha) (baseline: 0)</td>
<td>5a–5j. Project progress and completion reports</td>
</tr>
<tr>
<td>5a. Hegang: four rivers with a total length of 19.9 km rehabilitated and green flood protection embankment constructed (baseline: 0)⁹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b. Hegang: 7.2 km primary and 65.2 km secondary old district heating pipes retrofitted (baseline: 0)</td>
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<tr>
<td>5c. Hegang: 34.3 km road with sidewalks rehabilitated, including 29.1 km of bus priority lanes; and intelligent transport system equipment at 50 improved bus stops and lighting for safety of women installed (baseline: 0)</td>
<td></td>
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<tr>
<td>5d. Jixi: two rivers with a total length of 8.7 km and Hongqi lake (23.5 ha) rehabilitated and green flood protection embankment constructed (baseline: 0)⁹</td>
<td></td>
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</tr>
<tr>
<td>5e. Jixi: WTP with capacity of 50,000 m³/d upgraded and 72.5 km water supply pipes retrofitted; 23.3 km of sewers, and 32.5 km of drainage pipes and/or trench constructed (baseline: 0)</td>
<td></td>
<td></td>
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<tr>
<td>5f. Jixi: 2.2 km of roads with associated utilities and a public park (3.2 ha) and 18,000 m² of multifunction public training facilities constructed (baseline: 0)</td>
<td></td>
<td></td>
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<tr>
<td>5g. Qitaihe: two WTPs with capacities of 100,000 m³/d and 50,000 m³/d upgraded, 17.8 km old main pipes retrofitted, 73.2 km pipes installed, and 15 pump stations built (baseline: 0)</td>
<td></td>
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<tr>
<td>5h. Qitaihe: 209 electric buses procured; and three bus terminals, including separate and safe facilities for women, constructed (baseline: 0)</td>
<td></td>
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<tr>
<td>5i. Shuangyashan: 24.7 km of water supply pipes, 3 pump stations, and</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 1

Results Chain
Performance Indicators with Targets and Baselines

- 3 water tanks constructed and their equipment installed; and
- 85.1 km of sewers and 52.3 km of drainage pipes installed (baseline: 0)
- Shuangyashan: 6.7 km of key road links constructed (baseline: 0)

Data Sources and Reporting Mechanisms

Risks

Key Activities with Milestones
1. Capacity in BDS and integrated project planning and management developed
   1.1 Recruit and mobilize implementation support consultants by 2018
   1.2 Implement BDS support to SMEs during 2018–2023
   1.3 Implement capacity development training during 2018–2023
   1.4 Implement and monitor EMP, resettlement plan, and SGAP during 2018–2023
2. Sustainable SME investment and access to finance in project cities improved
   2.1 Complete onlending agreements and subloan templates by Q4 2017
   2.2 Identify subprojects and sign subloan agreements for first batch by Q1 2018
   2.3 Identify subprojects in project cities and sign subloan agreements for second batch by Q2 2023
3. Key infrastructure and SME facilities in non-coal industrial parks in project cities constructed
   3.1 Design infrastructure, acquire land, and procure works during 2018–2020
   3.2 Implement infrastructure works and equipment installation during 2018–2023
4. Remediation and environmental cleanup from mining impacts in project cities improved
   4.1 Design, acquire land, and procure works during 2018–2020
   4.2 Implement works during 2018–2023
5. Integrated urban infrastructure and services in project cities improved
   5.1 Design infrastructure, acquire land, and procure works during 2018–2020
   5.2 Implement infrastructure works and equipment installation during 2018–2023

Inputs
ADB: $310 million (loan)\(^g\)
Government: $315 million

Assumptions for Partner Financing
EIB: $220 million equivalent (loan)\(^h\)
Domestic commercial banks: $106.4 million
Subborrowers: $69.6 million

Outputs not administered by ADB that are necessary to reach the outcome include selected subcomponents of outputs 3 and 4 (EIB)

ADB = Asian Development Bank, BDS = business development services, EIB = European Investment Bank, EMP = environmental management plan, ESMS = environmental and social management system, FI = financial intermediary, ha = hectare, km = kilometer, m\(^2\) = square meter, m\(^3\)/d = cubic meter per day, PMO = project management office, SGAP = social and gender action plan, SMEs = small- and medium-sized enterprises, TVET = technical and vocational education and training, WTP = water treatment plant, WWTP = wastewater treatment plant.

c “Person-year job” is defined as 12 months of employment equivalent for one person.
d Women-led SMEs are SMEs that are founded by women and/or have female senior executives.
e The flood risk management component is included in output 5 and as capacity development in output 1. It includes structural and nonstructural measures, such as hydrological and hydraulic modeling across the river basin, identification of upstream and downstream flood plain preservation options, early warning systems, adjustments to riverside greenway to increase flow and retention capacity, and additional stormwater retention ponds and depressed open space network. Sponge city is a concept in which greenways, parks, and wetlands maximize ecosystem services, including water resource management and stormwater retention, using ecosystems-based adaptation.
f Each city will design, build, and operate at least one pilot 2-star green building or above under the People’s Republic of China’s green building standard or green industrial building standard.
g Allocation for the (i) investment project components (outputs 1, and 3–5): $254.00 million (Hegang—$73.91 million, Jixi—$63.80 million, Qitaihe—$26.54 million, and Shuangyashan—$89.75 million); and (ii) FIC (output 2): $56.00 million (Hegang—$20.00 million, Jixi—$8.00 million, Qitaihe—$13.00 million, and Shuangyashan—$15.00 million).
h EIB loan allocation by project cities is $81.09 million for Hegang, $23.20 million for Jixi, $85.46 million for Qitaihe, and $30.25 million for Shuangyashan.

Source: ADB.
LIST OF LINKED DOCUMENTS
http://www.adb.org/Documents/RRPs/?id=49021-002-3

1. Loan Agreement
2. Project Agreement
4. Project Administration Manual: Investment Project Components (Section A)
5. Project Administration Manual: Financial Intermediation Component and Business Development Services Subcomponent (Section B)
6. Contribution to the ADB Results Framework
7. Development Coordination
8. Attached Technical Assistance Report
9. Financial Analysis
10. Economic Analysis
11. Country Economic Indicators
12. Summary Poverty Reduction and Social Strategy
13. Social and Gender Action Plan
14. Environmental Impact Assessment
15. Resettlement Plan: Hegang City
16. Resettlement Plan: Jixi City
17. Resettlement Plan: Qitaihe City
18. Resettlement Plan: Shuangyashan City
19. Financial Intermediary: Environmental and Social Management System Arrangement
20. Risk Assessment and Risk Management Plan

Supplementary Documents
22. Detailed Financial Management Assessment: Financial Intermediation Component
23. Detailed Economic Analysis
24. Climate Risk and Vulnerability Assessment
25. Economic Diagnostics Study and Diversification Roadmap
26. Sector Assessment for Small- and Medium-Sized Enterprises