



# Technical Assistance Report

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Project Number: 46487-001  
Policy and Advisory Technical Assistance (PATA)  
May 2013

## Republic of Kazakhstan: Alternative Urban Infrastructure Financing Modalities (Financed by the Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility)

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 30 April 2013)

Currency unit	–	tenge (T)
T1.00	=	\$0.0066094
\$1.00	=	T151.30

## ABBREVIATIONS

ADB	–	Asian Development Bank
PPP	–	public–private partnership
TA	–	technical assistance

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Type</b>	– Policy and advisory technical assistance (PATA)
<b>Targeting classification</b>	– General intervention
<b>Sector (subsectors)</b>	– Water supply and other municipal infrastructure and services (water supply and sanitation, waste management), finance (investment funds, money and capital markets)
<b>Themes (subthemes)</b>	– <b>Private sector development</b> (promotion of private sector investment, a conducive policy and institutional environment), economic growth (promoting economic efficiency and enabling business environment), capacity development (institutional development)
<b>Climate change</b>	– Climate change mitigation and adaptation
<b>Location (impact)</b>	– Urban (high), national (high), rural (low)
<b>Partnership</b>	– Government of Sweden

## NOTE

In this report, "\$" refers to US dollars.

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## I. INTRODUCTION

1. The Government of Kazakhstan requested assistance from the Asian Development Bank (ADB) to support the development and financing of urban infrastructure.<sup>1</sup> In consultation with stakeholders from the public and private sectors, ADB developed a policy and advisory technical assistance (TA) concept from May 2012 to January 2013, and approved the concept paper on 11 February 2013.<sup>2</sup> Discussions were held with the Ministry of Economy and Budget Planning, Kazakhstan Public–Private Partnership Center (PPP Center), the Ministry of Regional Development, and development partners. The TA builds on ongoing work that supports the improvement of policy, regulatory, and institutional frameworks for private sector participation in infrastructure in urban and other sectors of the country.<sup>3</sup> This TA paper reflects the agreements reached with the government on the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and terms of reference for the TA. The design and monitoring framework is in Appendix 1.

## II. ISSUES

2. Kazakhstan is characterized by an uneven distribution and low density of population. With 54% of its more than 16 million population living in urban areas, it has one of the highest urban ratios in Central Asia. The total population of the 21 largest cities is 7 million or 43% of the total population. The average population density is 5.8 people per square kilometer and is one of the lowest in the world. These characteristics pose a challenge for infrastructure development in the country. Infrastructure is unable to take advantages of densification and the economies of scale that come with it. This, in turn, has implications for the cost of infrastructure and the willingness of the private sector to participate in its development.

3. Despite being a middle-income country, Kazakhstan needs investment in urban infrastructure development. The country's aging and dilapidated urban transport, water supply and sanitation, solid waste management, and district heating infrastructure requires substantial investment, estimated at more than \$25 billion through 2040.<sup>4</sup> Since the breakup of the former Soviet Union, the government has focused mainly on Astana and Almaty, creating a significant imbalance in terms of urban development. The government has devolved service delivery to local government units without adequate funding, apart from subsidies for operations and urgent interventions to fund breakdowns. These subsidies are not shared equally among regional governments. Local governments, except for in Astana and Almaty, are not allowed to incur

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<sup>1</sup> The TA is included in the country operations business plan, 2012–2014 (ADB. 2012. *Country Operations Business Plan: Kazakhstan, 2012–2014*. Manila). The TA was originally titled Kazakhstan: Urban Infrastructure Development when financing was approved in July 2012 on a grant basis by the Urban Environmental Infrastructure Fund.

<sup>2</sup> The TA first appeared in the business opportunities section of ADB's website on 19 February 2013.

<sup>3</sup> On 16 January 2013 the government announced that the Ministry of Economic Development and Trade would be reorganized into the Ministry of Economy and Budget Planning with the transfer of the budget planning functions from the Ministry of Finance and the function of creation of a favorable investment climate from the Ministry of Industry and New Technologies. This reorganization will also result in the Agency for Construction, Housing and Utilities being reorganized into the Committee of Construction, Housing and Utilities and the transfer of it and the Sectorial Development Department to the newly established Ministry of Regional Development, hence it is included as an implementing agency.

<sup>4</sup> Core urban sector investment requirements (water supply and sanitation, district heating network and related energy efficiency, solid waste management, and urban mobility) until 2040 are estimated at \$12.8 billion–\$14.3 billion. In addition, energy sector investment requirements for combined heat and power generation and related heat distribution (primarily for district heating purposes of the urban sector and industrial activities utilizing heat) are projected at \$8.5 billion–\$10.7 billion until 2040. Extrapolating these numbers, direct investment needs for the urban sector are about \$14.3 billion and indirect investment needs in the energy sector that are benefiting urban sector infrastructure are about \$10.7 billion.

debt and are dependent on central government transfers for capital investments.

4. The result is rapidly deteriorating urban infrastructure and services delivery outside the two main cities, particularly for the poor and women. Most of the water collection, treatment, and distribution infrastructure inherited from the Soviet period is in physical disrepair. This has resulted in poor technical performance and quality of drinking water—key factors that impact public health. At least 10% of households do not have running water and about 20% of the population has no access to a proper sewage system. Estimates of nonrevenue water supply arising from system losses range from 25% to 60%, but actual losses may be greater due to the lack of metering. A preliminary assessment suggests that all major and key intermediary cities have inefficient solid waste management systems, which are unable to cope with rapid urbanization. Supply of heat to multi-apartment buildings (district heating) during the cold season is a basic human need in Kazakhstan's cold climate, yet the distribution and piping network is outdated and inefficient and the technology is obsolete. Much of the heat produced is lost due to leakages, lack of proper thermal insulation, and inadequate energy efficiency infrastructure in the housing stock. Greenhouse gas emissions from the heating system are estimated at 42 million–46 million tons of carbon dioxide per year, or almost 20% of total emissions. Women in urban areas particularly note problems with heating distribution and water supply, and increasing tariffs combined with poor service. Improved urban infrastructure would enhance living standards for the poor and women, and increase time for productive activities.<sup>5</sup>

5. Alternative sources of capital are available from local pension funds, the National Oil Fund and the Sovereign Wealth Fund (Samruk Kazyna), and potentially from local and foreign debt and equity markets. However, Kazakhstan has not yet found a strategy or a structure to effectively mobilize this capital for urban infrastructure development. The lack of a comprehensive sector strategy and weak policy and regulatory frameworks for urban infrastructure investment result in major unmitigated risks. Investment instruments and markets that enable capital from the private sector to be channeled efficiently into urban infrastructure with a more optimal risk structure are not yet available.

6. The government is supportive of private sector participation in developing and financing public infrastructure through public–private partnerships (PPPs) and other structures. This is highlighted by the creation of the PPP Center under the Ministry of Economic Development and Trade in 2008. The PPP Center had the original mandate to develop recommendations on legislative norms, give methodological guidance, and conduct round tables and workshops for government units responsible for public infrastructure. The PPP Center now has a substantially expanded role, which includes structuring PPP projects, engaging consultants and experts, developing bidding documents and draft contracts, conducting road shows, negotiating with potential concessionaires alongside the relevant sector or local government unit, and analyzing applications for funding and other support for PPPs from the state budget.

7. A number of potential PPP projects have been developed as a result of this central government support and local government efforts, but most have not yet reached financial closure. Concession agreement details for awarded projects were not disclosed. The government and private sector developers and their financiers had different expectations about how much public sector participation was needed in the form of initial funding, viability gap support, and explicit government guarantees. The few projects that were implemented defaulted, and claims were made against ill-defined government guarantees. Kazakhstan has an existing law on concessions to support private sector participation for infrastructure

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<sup>5</sup> ADB. 2012. *Country Partnership Strategy: Kazakhstan, 2012–2016*. Manila.

development and service delivery. However, the law in its current form is not comprehensive and has gaps that deter private sector investment.

### **III. THE TECHNICAL ASSISTANCE**

8. Using select priority projects in two or three intermediary cities as demonstration projects, the TA will help develop a well-documented and structured program of private sector participation and financing options. The TA will suggest methods to more efficiently utilize the country's large pool of capital held by local pension funds, the National Oil Fund, and other investors for urban infrastructure development. The related policy, legal, and regulatory gaps arising from the assessments of these projects, but with wider sector implications, will be identified. The TA will have two parts: suggested policy improvements to make urban infrastructure investments less risky and therefore more attractive to private sector participation, and initial assessments of alternative approaches and financing modalities for the selected priority projects. The objective is to change the government's perception and understanding of how it can (i) strengthen investor confidence while tangibly minimizing risks in some of the main investment phases and components of the priority development projects, and (ii) create the conditions needed to effectively mobilize private sector participation through debt, equity, and other means for financially and economically sustainable urban and other public infrastructure development.

#### **A. Impact and Outcome**

9. The impact will be an improved enabling environment for private sector participation in selected priority urban infrastructure projects in intermediary cities in Kazakhstan. The outcome will be a range of alternative financing modalities developed to enhance the government's ability to reduce the risk of priority urban infrastructure projects.

#### **B. Methodology and Key Activities**

10. The TA will start with a review of lessons identified by sector stakeholders with respect to private sector participation in priority environmental, pro-poor urban infrastructure and services in Kazakhstan. This will include evaluation of existing and proposed policy, regulatory, and institutional frameworks and the capacity of capital markets to support private sector participation in urban infrastructure. It will also cover an assessment of existing subsector assessments of water supply and sanitation, district heating, and solid waste management and related projects. Together, these will be used as the basis for a draft advisory paper to recommend strategy to ease constraints and improve the enabling environment for mobilizing private sector participation.

11. An advisory panel comprising representatives of the central government, selected intermediary cities, private sector participants, and other key stakeholders will be constituted. The panel will serve as a platform and feedback mechanism for dialogue and discussion to improve the recommendations of the advisory paper and create buy-in for them. In parallel with dialogue on the draft advisory recommendations, the subsector assessments will be discussed with the central government and local government units to identify 6–8 priority urban infrastructure projects. A complete financial and technical prefeasibility assessment of the identified project will be conducted and alternative and innovative ownership, management, and financing structures will be prepared for each project.

12. Prefeasibility assessments of the alternative and/or innovative ownership, management, and financing structures will be used to undertake consultations with commercial banks in Kazakhstan, pension funds and other institutional investors, export credit agencies, and multilateral and bilateral development partners. They will focus on new and alternative forms of finance, credit enhancement, and technical and capacity building support to mobilize commercial cofinancing with a clear exit strategy for the government's initial investment. The identified ownership, management, and financing structures and forms of support for mobilizing commercial cofinancing for each priority project will feed into the advisory paper for stakeholder discussion, government consideration and endorsement.

13. Specific TA outputs will be (i) updated diagnostic assessments and advice on improving policy, regulatory, and institutional frameworks for private sector participation in urban infrastructure; (ii) a dialogue mechanism with various stakeholders; (iii) priority projects identified, and government readiness established to test new and/or alternative modalities for developing and financing these projects through a long-term action plan; (iv) alternative ownership, management, and financing structures proposed as options for each of the priority projects identified; and (v) methods for effectively mobilizing commercial and official cofinancing established.

14. Active participation by key government and sector stakeholders is important for effective TA implementation. Continued government leadership of urban infrastructure development, as articulated in the country partnership strategy, 2012–2016, is expected along with the implementation of relevant policy, regulatory, and institutional reforms. Private sector interest in developing infrastructure in intermediary cities is assumed to increase; and local capital market investors are expected to engage in identified investment opportunities. Potential risks are

- (i) central, regional, local, and municipal governments are unable to reach consensus;
- (ii) changes in government priorities may weaken urban investment options; and
- (iii) unaddressed systemic and structural risks in Kazakhstan could impact financial market and institutional investor participation in infrastructure. These will be managed through dialogue with government, sector stakeholders, and policy makers during TA implementation.

## **C. Cost and Financing**

15. The TA is estimated to cost \$1,175,000, of which \$1,000,000 will be financed on a grant basis by the Urban Environmental Infrastructure Fund<sup>6</sup> under the Urban Financing Partnership Facility.<sup>7</sup> The cost estimates and financing plan is in Appendix 2. The government will provide counterpart support in the form of counterpart staff time, office space, secretarial assistance, arrangements to meet with suitable stakeholders in the public and private sectors, and other in-kind contributions.

## **D. Implementation Arrangements**

16. The executing agency for the TA will be the Investment Policy Department of the Ministry of Economy and Budget Planning. The implementing agencies will be the Ministry of Finance, Kazakhstan PPP Center, and the Ministry of Regional Development (footnote 3). The Public Management, Financial Sector, and Trade Division (CWPF) and Urban Development and

<sup>6</sup> Contributor: the Government of Sweden.

<sup>7</sup> Administered by the Asian Development Bank.

Water Division (CWUW) will jointly act as the focal point and coordinator of consultant inputs and activities. The Transaction Advisory Services Team of the Central and West Asia Department and Private Sector Operations Department will be actively consulted on relevant issues during TA implementation. Staff of the Kazakhstan Resident Mission will be involved in monitoring project implementation activities. The TA will be implemented from June 2013 to May 2015.

17. The TA will engage five international consultants for 25 person-months and five national consultants for 18 person-months to provide policy advice and technical and capacity development assistance during TA implementation. In accordance with the cross-cutting approach of the TA, the consultant team will include experts in municipal infrastructure and urban development planning, project finance and capital markets, PPPs, institutional development, economics, and law. The skills mix and qualifications required from the consultants are diverse, and difficult to source from any one consulting firm. ADB will engage the consultants on an individual basis in accordance with its Guidelines on the Use of Consultants (2010, as amended from time to time), and make disbursements in accordance with the *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). The TA team and implementing agencies will coordinate and assure the quality of consultant outputs. Outline terms of reference for consultants are provided in Appendix 3. The consultant team will submit (i) an inception report 3 weeks after the start of their services; (ii) interim progress reports at appropriate stages of TA implementation; (iii) a draft final report before the conclusion of the contract; (iv) a final report; and (v) activity-specific reports consistent with the design and monitoring activities and outputs.

18. The TA findings and related policy and technical advisory interventions will be discussed with stakeholders during a series of workshops and advisory panel discussions to inform, build ownership for, and ensure functional understanding of the TA recommendations. The executing and implementing agencies and ADB staff will monitor the timeliness and quality of TA outputs. Missions of the project team to Kazakhstan will be organized on a semi-annual basis. The final evaluation of the project will be based on performance indicators outlined in the design and monitoring framework. A final knowledge-sharing workshop will develop a feedback process for good practices that are identified. Lessons will be disseminated to country stakeholders and ADB staff through a seminar and a knowledge product in the form of a policy advisory note.

#### **IV. THE PRESIDENT'S DECISION**

19. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$1,000,000 to the Government of Kazakhstan to be financed on a grant basis by the Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility for Alternative Urban Infrastructure Financing Modalities, and hereby reports this action to the Board.



## DESIGN AND MONITORING FRAMEWORK

<b>Design Summary</b>	<b>Performance Targets and Indicators with Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
<b>Impact</b> Improved enabling environment for private sector participation in selected priority urban infrastructure projects in intermediary cities in Kazakhstan	Private sector investment in urban infrastructure increases to 15% of total annual investment in urban infrastructure in at least two of the selected host intermediary cities by 2020 (2012 baseline: negligible)	Reports from the PPP Center, Kazakhstan Investment Fund and local government units	<b>Assumptions</b> Private sector interest in developing infrastructure in intermediary cities increases  Local capital market investors engage in identified investment opportunities  <b>Risks</b> Government priorities for urban infrastructure development change  The government does not address structural risks for investor and financial market participation in urban infrastructure
<b>Outcome</b> A range of alternative financing modalities developed to enhance the government's ability to reduce the risks for priority urban infrastructure projects	At least one host intermediary city agrees to begin rehabilitation or construction of a priority project, using at least one form of alternative financing modality (by mid-2015)  Advisory panel of key stakeholders reviews and endorses a range of alternative financing modalities (by end 2014)	Prefeasibility study from the host intermediary city  Terms of reference finalized and endorsed by the PPP Center	<b>Assumption</b> Implementation of policy, regulatory, and institutional reforms is sustained  <b>Risk</b> Parliamentary processes delay suggested amendments to support an enabling environment
<b>Outputs</b> 1. Updated diagnostic assessments as inputs to the CPS, and advice on improving policy, regulatory, and institutional frameworks for private sector participation in urban infrastructure	Draft TA advisory paper completed (by October 2013)  Knowledge-sharing workshop held with advisory panel to discuss TA advisory paper (by November 2013)	TA consultant report, government notifications  TA consultants' report, government notifications	<b>Assumptions</b> Different levels of government collaborate  Government leadership on urban infrastructure development continues as articulated in the CPS, 2012–2016

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks				
	Government endorses framework improvements for private sector participation in urban infrastructure (by July 2014)	TA advisory paper, government notifications	<b>Risk</b> Consensus building to establish pipeline of high priority projects may take longer than expected				
2. Dialogue mechanism established with various stakeholders	Advisory panel with key representatives of the central government, selected intermediary host cities, private sector participants, and other stakeholders constituted (by October 2013)	TA consultants' report, government notifications					
3. Priority projects identified, and government readiness established to test alternative development and financing modalities for these projects through a long-term action plan	Two to three host intermediary cities and the central government endorse six to eight priority projects with an action plan, with strong demonstration potential and scope for leveraging development partner initiatives and potential cofinancing (by July 2014)	TA consultants' report, government notifications					
4. Alternative ownership, management, and financing structures proposed as options for each priority project identified	Alternative structures presented to the central government and host intermediary cities (by March 2015)	TA consultants' report, government notifications					
5. Methods for effectively mobilizing commercial and official cofinancing established	Position paper on various forms of finance, credit enhancement, and technical and capacity building support presented to the central government and host intermediary cities for each of the identified priority projects (by March 2015)	Minutes of meetings					
<b>Activities with Milestones</b>		<b>Inputs</b>					
1.1 Mobilize consultants (June 2013). 1.2 Review lessons identified by sector stakeholders; existing urban subsector assessments of WSS, district heating, and SWM, and related projects; existing policy, regulatory, and institutional frameworks; and capacity of capital markets to support private sector participation in urban infrastructure (July–September 2013). 1.3 Prepare draft advisory paper recommending strategy for easing existing constraints, improving		<b>ADB: \$1,000,000</b>					
		<table><tr><th>Item</th><th>Amount</th></tr><tr><td>UEIF under the UFPF</td><td>\$1,000,000</td></tr></table>		Item	Amount	UEIF under the UFPF	\$1,000,000
		Item	Amount				
UEIF under the UFPF	\$1,000,000						
<b>Government</b> The government will provide counterpart support in the form of counterpart staff time, office space, secretarial assistance, arrangements to meet with suitable							

Activities with Milestones	Inputs
<p>policy, regulatory, and institutional frameworks; and mobilizing capital for private sector participation in urban infrastructure (October 2013).</p> <p>1.4 Conduct knowledge-sharing workshops with the advisory panel to discuss and improve the draft advisory paper (November 2013).</p> <p>1.5 Seek government endorsement of the advisory paper (July 2014).</p> <p>2.1 Finalize terms of reference and select members of the advisory panel (October 2013).</p> <p>3.1 Discuss urban subsector assessments with the central government and local government units to identify 6–8 priority projects (November 2013–January 2014).</p> <p>3.2 Undertake financial and technical prefeasibility assessment of each identified priority project (February–July 2014).</p> <p>4.1 Prepare alternative ownership, management, and financing structures for each project (March–July 2014).</p> <p>5.1 Undertake consultations with pension funds, other institutional investors, and commercial banks in Kazakhstan; with international banks, official export credit agencies and export-import banks, political risk insurers, and multi- and bilateral development partners (May–July 2014).</p> <p>5.2 Based on these consultations, identify new and alternative forms of finance, credit enhancement, and technical and capacity building support to mobilize commercial cofinancing, including a clear exit strategy for the government's initial investment (August–November 2014).</p> <p>5.3 Discuss identified alternative ownership, management, and financing structures (output 4) and forms of support for mobilizing commercial cofinancing (output 5) for each priority project with the advisory panel and present them to the government for consideration and endorsement, and to stakeholders for knowledge sharing (December 2014–March 2015).</p>	<p>stakeholders in the public and private sectors, and other in-kind contributions.</p>

ADB = Asian Development Bank, CPS = country partnership strategy, PPP = public–private partnership, TA = technical assistance, UEIF = Urban Environmental Infrastructure Fund, UFPF = Urban Financing Partnership Facility.  
Source: ADB.

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

<b>Item</b>	<b>Amount</b>
<b>Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility<sup>a</sup></b>	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (25.0 person-months)	605.00
ii. National consultants (18.0 person-months)	185.00
b. International and local travel	105.00
c. Reports, communication, and translation	15.00
2. Land transport vehicle hire	15.00
3. Workshops	15.00
4. Miscellaneous administration, support costs, and interpretation	15.00
5. Contingencies	45.00
<b>Total</b>	<b>1,000.00</b>

Note: The technical assistance (TA) is estimated to cost \$1,175,000, of which contributions from the Urban Environmental Infrastructure Fund under the Urban Financing Partnership Facility are presented in the table above. The government will provide counterpart support in the form of counterpart staff time, office space, secretarial assistance, arrangements to meet with suitable stakeholders in the public and private sectors, and other in-kind contributions. The value of the government contribution is estimated to account for 14.8% of the total TA cost.

<sup>a</sup> Contributor: the Government of Sweden. Administered by the Asian Development Bank (ADB).

Source: ADB estimates.

## **OUTLINE TERMS OF REFERENCE FOR CONSULTANTS**

1. The technical assistance (TA) requires a team of five international (25 person-months) and five national (18 person-months) specialists. The Asian Development Bank (ADB) will engage the consultants on an individual basis in accordance with its Guidelines on the Use of Consultants (2010, as amended from time to time). The consultants will submit all required reports in English and Kazakh. The national consultants, aided by professional translators, will be responsible for the Kazakh translations.

### **A. Team Leader** (international, 5 person-months)

2. The team leader will have at least 20 years of professional experience in municipal infrastructure development or in corporate and investment finance related to municipal infrastructure financing structures and related development projects; experience with water supply and sanitation (WSS), solid waste management (SWM), and/or district heating; and extensive experience in project management and team leadership in emerging markets preferably with ADB or other multilateral and bilateral development partners. The team leader will lead the team of international and national specialists, and be responsible for delivering all of the TA outputs. In particular, the team leader will ensure that the challenges and obstacles in public infrastructure development and finance are analyzed through a review of the country's existing and proposed public–private partnership (PPP) and public investment legislation; urban services policy, legislative, tariffs, and regulatory framework; urban sector institutional setup; and related governance standards of regional and local governments, especially from the perspective of major cost recovery and long-term sector development and investment challenges.

### **B. Municipal Infrastructure Development Specialist** (international, 4 person-months)

3. The specialist will have at least 15 years of professional experience in municipal infrastructure development, preferably in emerging markets, with a focus on WSS, SWM, and/or district heating; extensive experience in technical assessments and feasibility studies; and a civil engineering degree. The specialist (with the assistance of the team leader and PPP and institutional development specialist) will help the host intermediary cities and central government identify 6–8 priority projects in two or three intermediary cities of Kazakhstan. The specialist will subsequently help prepare the city development plans in the same cities and make appropriate prefeasibility analysis of the proposed investment projects.

### **C. Senior Urban Development Specialist** (international, 6 person-months)

4. The specialist will have at least 15 years of professional experience in urban planning and/or urban development, preferably in emerging markets; experience in economic and sector assessments of urban development projects is desirable. The specialist will identify the policy and regulatory frameworks that need to be strengthened in terms of urban planning and assessment of long-term investment needs in the urban sector. The specialist will assist host intermediary governments, the central government, and potential institutional investors to properly understand and assess the price of risks during construction and during operation and maintenance in the selected priority projects; and assist in understanding the best allocation of construction, technology, operating, financing, commercial, political, natural, and other project risks in the country's urban projects.

**D. Public–Private Partnership and Institutional Development Specialist** (international, 5 person-months)

5. The specialist must have at least 12 years of experience in developing municipal infrastructure projects on a PPP basis, preferably in emerging markets and transition economies facing incomplete or underdeveloped regulatory and legal frameworks and environments; experience in developing institutional capacity for municipalities and in the urban sector environment is desirable. The specialist will (with the assistance of the team leader and the municipal infrastructure development specialist) help the host intermediary cities and central government identify 6–8 high priority projects in two or three intermediary cities with (i) strong demonstration potential and scope for leveraging development partner initiatives and potential cofinancing; and (ii) immediate need for investment to improve quality and affordability of services, particularly with respect to the poor and the environment. The specialist will propose (with the help of the team leader, senior finance and capital markets specialist, and others) alternative ownership, management, and financing structures for each project to the central government and host intermediary cities as options, which will decrease the risk or better allocate risks during pre- and postcompletion periods, prepare for private sector participation at the right time, and maximize the government's economic return on investment. The specialist will also help the senior finance and capital markets specialist to undertake financial and technical prefeasibility assessment of each identified priority project, and identify and propose new and alternative forms of finance, credit enhancement, and technical and capacity building support to help mobilize commercial cofinancing.

**E. Senior Finance and Capital Markets Specialist** (international, 5 person-months)

6. The specialist will have at least 15 years of experience in developing financial and capital markets in emerging markets and/or transition economies of the former Soviet Union countries. The specialist will assess and make recommendations that will help the domestic capital market be a source of additional equity and long-term debt financing for urban infrastructure development. This would include recommendations about possible further TA that would help (i) market participants to better understand, allocate, and price risks during and after implementation of the selected priority projects; and (ii) strengthen the supervisory and regulatory capacities of the pension and insurance regulator with regard to such risks. The specialist (with the help of the team leader, PPP and institutional development specialist, and others) will undertake the financial and technical prefeasibility assessment of each identified priority project; in particular considering the willingness and ability of customers to pay for the services provided by the project, the cost of rehabilitation or construction of the project, and other factors, regardless of how the project is structured and financed. The specialist will help the PPP and institutional development specialist propose alternative ownership, management, and financing structures for each project to the central government and host intermediary cities as options—these are to reduce the risk or better allocate risks during and after project implementation, prepare for private sector participation at the right time, and maximize the government's economic return on investment. The specialist will consult with pension funds, other institutional investors, and commercial banks in Kazakhstan, and with international banks, official export credit agencies and export–import banks, political risk insurers, and multilateral and bilateral development partners; and identify and propose (with the help of the team leader, PPP and institutional development specialist, and others) new and alternative forms of finance, credit enhancement, and technical and capacity building support to help mobilize commercial cofinancing that will provide a clear exit strategy for the government's initial investment.

**F. National Infrastructure Development Specialist** (national, 4 person-months)

7. The specialist will have at least 10 years of professional experience in municipal infrastructure development in Kazakhstan with a focus on WSS, district heating, and SWM; and some experience in technical assessments and feasibility studies. A civil engineering degree would be desirable. The specialist will assist the team leader and other specialists in preparing city development plans in the same cities and make appropriate prefeasibility analysis of the priority projects.

**G. National Public–Private Partnership Specialist** (national, 4 person-months)

8. The specialist must have at least 5 years of experience in developing infrastructure projects on a PPP basis; experience in developing institutional capacity for municipalities and in the urban sector environment in Kazakhstan would be desirable. The specialist will assist the international PPP and institutional development specialist.

**H. National Urban Economy and Finance Specialist** (national, 4 person-months)

9. The specialist will have at least 5 years of professional experience in urban planning and/or urban development; experience in economic and/or sector assessments of urban development projects in Kazakhstan would be desirable. The specialist will assist the international senior urban planning specialist–urban economist.

**I. National Capital Markets Development Specialist** (national, 3 person-months)

10. The specialist will have at least 5 years of experience in developing the financial and capital markets sector in emerging markets and/or transition economies of the former Soviet Union countries. The specialist will assist the senior finance and capital markets specialist.

**J. National Institutional and Social Specialist** (national, 3 person-months)

11. The specialist must have at least 5 years of experience in developing municipal infrastructure projects on a PPP basis, preferably in emerging markets and/or transition economies of the former Soviet Union countries. Experience with developing institutional capacity for municipalities and in the urban sector environment is desirable. The specialist will work on an improved institutional cross-cutting framework between the urban sector and national PPP legislation and institutions.

12. Based on their national experience and sector technical knowledge, the national specialists will help develop strategies, mechanisms, programs, and policy interventions that maximize the TA's contribution to Kazakhstan's overall development goals, and specifically its urban development agenda. The national specialists will be required to (i) support activities of the international specialists in the field, including reviewing and translating documents and literature; collecting data and information; research and analysis (both quantitative and qualitative); and preparing notes and briefs; (ii) coordinate with the executing agency and the implementing agencies, and (iii) provide technical and administrative support to the international consultant team, as needed.