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Report No: PAD1559

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 4.9 MILLION
(US\$6.6 MILLION EQUIVALENT)

AND A

PROPOSED GRANT

IN THE AMOUNT OF SDR 4.0 MILLION
(US\$5.4 MILLION EQUIVALENT)

TO THE

KYRGYZ REPUBLIC

FOR AN

URBAN DEVELOPMENT PROJECT (P151416)

FEBRUARY 18, 2016

Social, Urban, Rural and Resilience Global Practice
EUROPE AND CENTRAL ASIA

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CURRENCY EQUIVALENTS

(Exchange Rate Effective November 30, 2015)

Currency Unit	=	Kyrgyzstan Som (KGS)
73.03 KGS	=	USD 1
1.37 USD	=	SDR 1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
ARIS	<i>Agentstvo Razvitiya I Investirovaniya Soobschtv Kyrgyzkoi Respubliki</i> (Community Development and Investment Agency)
B40	Bottom 40
BOUIP	Bishkek and Osh Urban Infrastructure Project (BOUIP, BOUIP Additional Financing AF)
CE	Citizen Engagement
CPS	Country Partnership Strategy
DALY	Disability Adjusted Life Years
EA	Environmental Assessment
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia
ECU	Eurasian Customs Union
ESMF	Environmental & Social Management Framework
EMP	Environmental Management Plan
ERR	Economic Rate of Return
FM	Financial Management
ESMAP	Energy Sector Management Assistance Program
GFDRR	Global Facility for Disaster Risk Reduction and Recovery
GNI	Gross National Income
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFR	Interim Financial Report
KGGTF	Korean Green Growth Trust Fund
M&E	Monitoring and Evaluation
MoF	Ministry of Finance
MSK	Medvedev-Sponheuer-Karnik
MTR	Mid-Term Review
NPV	Net Present Value
NSDS	National Sustainable Development Strategy
O&M	Operations and Maintenance
OM	Operational Manual
PAP	Project Affected People
PDO	Project Development Objective
PIU	Project Implementation Unit
PPD	Public Procurement Department of the Ministry of Finance
PPL	Public Procurement Law
PRAMS	Procurement Risk Assessment and Management System
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RWSSP	Rural Water Supply and Sanitation Projects (RWSSP1 & 2)
SAACCS	State Agency for Architecture, Construction and Communal Services
SORT	Systematic Operations Risk-Rating Tool

STICBP Small Towns Infrastructure and Capacity Building Project
TA Technical Assistance
TRACE Tool for Rapid Assessment of City Energy
UDP Urban Development Project
VIP Village Investment Projects (VIP I, II and III)
WG Working Group

Regional Vice President:	Cyril E. Muller
Country Director:	Saroj Kumar Jha
Senior Global Practice Director:	Ede Jorge Ijjasz-Vasquez
Practice Manager:	David N. Sislen
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KYRGYZ REPUBLIC
Urban Development Project

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Kyrgyz Republic
Urban Development Project (P151416)
PROJECT APPRAISAL DOCUMENT

EUROPE AND CENTRAL ASIA
0000009350

Report No.: PAD1559

Basic Information			
Project ID P151416	EA Category B - Partial Assessment	Team Leader(s) Kremena M. Ionkova, Paula Restrepo Cadavid	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 16-March-2016	Project Implementation End Date 30-Jun-2020		
Expected Effectiveness Date 16-Sept-2016	Expected Closing Date 31-Dec-2020		
Joint IFC No			
Practice Manager/Manager David N. Sislen	Senior Global Practice Director Ede Jorge Ijjasz-Vasquez	Country Director Saroj Kumar Jha	Regional Vice President Cyril E Muller
Borrower: Government of Kyrgyz Republic			
Responsible Agency: ARIS (Project Implementing Entity)			
Contact: Telephone No.: 996312301805	Balbak Umetov	Title: Coordinator	Email: bumetov@aris.kg
Project Financing Data(in USD Million)			
[] Loan	[X] IDA Grant	[] Guarantee	
[X] Credit	[] Grant	[] Other	
Total Project Cost:	14.40	Total Bank Financing:	12.00
Financing Gap:	0.00		

Financing Source						Amount				
BORROWER/RECIPIENT						2.40				
International Development Association (IDA)						6.60				
IDA Grant						5.40				
Total						14.40				
Expected Disbursements (in USD Million)										
Fiscal Year	2017	2018	2019	2020	2021	0000	0000	0000	0000	0000
Annual	0.50	1.00	4.00	5.00	1.50	0.00	0.00	0.00	0.00	0.00
Cumulative	0.50	1.50	5.50	10.50	12.00	0.00	0.00	0.00	0.00	0.00
Institutional Data										
Practice Area (Lead)										
Social, Urban, Rural and Resilience Global Practice										
Contributing Practice Areas										
Energy & Extractives, Water										
Cross Cutting Topics										
[X] Climate Change										
[] Fragile, Conflict & Violence										
[X] Gender										
[] Jobs										
[] Public Private Partnership										
Sectors / Climate Change										
Sector (Maximum 5 and total % must equal 100)										
Major Sector	Sector				%	Adaptation Co-benefits %		Mitigation Co-benefits %		
Public Administration, Law, and Justice	Sub-national government administration				20					
Public Administration, Law, and Justice	Public administration-Other social services				30			80		
Water, sanitation and flood protection	Solid waste management				20			15		
Water, sanitation and flood protection	General water, sanitation and flood protection sector				30			5		
Total					100					

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes		
Theme (Maximum 5 and total % must equal 100)		
Major theme	Theme	%
Public sector governance	Other public sector governance	10
Urban development	Urban planning and housing policy	10
Urban development	City-wide Infrastructure and Service Delivery	80
Total		100

Proposed Development Objective(s)

The PDO of the proposed project is to improve the quality of municipal services and pilot energy efficiency and seismic resilience retrofits of urban infrastructure in participating towns.

Components	
Component Name	Cost (USD Millions)
Component A: Urban Development	12.80
Component B: Institutional Strengthening	0.70
Component C: Implementation Support	0.90

Systematic Operations Risk- Rating Tool (SORT)	
Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Low
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
OVERALL	Moderate

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]	
Does the project require any waivers of Bank policies?	Yes []	No [X]	
Have these been approved by Bank management?	Yes []	No [X]	
Is approval for any policy waiver sought from the Board?	Yes []	No [X]	
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []	
Safeguard Policies Triggered by the Project			
	Yes	No	
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04		X	
Forests OP/BP 4.36		X	
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11		X	
Indigenous Peoples OP/BP 4.10		X	
Involuntary Resettlement OP/BP 4.12	X		
Safety of Dams OP/BP 4.37		X	
Projects on International Waterways OP/BP 7.50	X		
Projects in Disputed Areas OP/BP 7.60		X	
Legal Covenants			
Name	Recurrent	Due Date	Frequency
Modification of existing accounting software		15-Oct-2016	
Description of Covenant			
The Recipient shall ensure that ARIS modifies the existing accounting software for its accounting and financial reporting purposes acceptable to the Association, with capacity to, inter alia, generate IFRs, statement of expenditures, withdrawal applications and annual financial statements, in a manner acceptable to the Association.			
Legal Covenants			
Name	Recurrent	Due Date	Frequency
Construction Supervision satisfactory to the Association	YES		
Description of Covenant			
Prior to the commencement of any civil works under Part 1 of the Project, the Recipient shall cause the Project Implementing Entity to recruit the necessary professional construction supervision in a manner satisfactory to the Association.			

Conditions				
Source Of Fund	Name			Type
IDA	Subsidiary Agreement			Effectiveness
Description of Condition				
The Kyrgyz Republic through its Ministry of Finance shall enter into a Subsidiary Agreement with ARIS, on terms and conditions satisfactory to the Association.				
Conditions				
Source Of Fund	Name			Type
IDA	Project Operational Manual			Effectiveness
Description of Condition				
The Recipient shall cause the Project Implementing Entity to prepare and adopt a Project Operational Manual in a manner satisfactory to the Association.				
Team Composition				
Bank Staff				
Name	Role	Title	Specialization	Unit
Kremena M. Ionkova	Team Leader (ADM Responsible)	Sr. Urban Development Specialist	Sr. Urban Development Specialist	GSURR
Paula Restrepo Cadavid	Team Leader	Urban Economist	Urban Economist	GSURR
Irina Goncharova	Procurement Specialist	Procurement Specialist	Procurement Specialist	GGODR
Nodar Mosashvili	Financial Management Specialist	Consultant	Financial Management Specialist	GGODR
Aidai Bayalieva	Team Member	Transport Specialist	Operations Officer	GTIDR
Nightingale Rukuba- Ngaiza	Counsel	Senior Counsel	Country Lawyer	LEGLE
Ekaterina Romanova	Safeguards Specialist	Social Development Specialist	Social Development Specialist	GSURR
Alisher Khamidov	Team Member	Consultant	Social Development Specialist	GSU03
Asli Gurkan	Team Member	Social Development Specialist	Social Development Specialist	GSURR

Janelle Plummer	Team Member	Sr. Social Development Specialist	Sr. Social Development Specialist (Citizen Engagement)	GSURR
Cesar Niculescu	Safeguards Specialist	Environmental Specialist	Environmental Specialist	GENDR
Christian Daniel Mahler	Team Member	Jr Professional Officer	Energy Efficiency Specialist	GEEES
Delphine Alberta Hamilton	Team Member	Sr. Program Assistant	Sr. Program Assistant	GSURR
Hadji Huseynov	Team Member	Sr. Infrastructure Specialist	Sr. Infrastructure Specialist	GWADR
Jasna Mestnik	Team Member	Finance Officer	Disbursement Officer	WFALA
Kathrin Hofer	Team Member	Energy Specialist	Energy Specialist	GEEDR
Leyla Talipova	Team Member	Consultant	Engineering Consultant	GSUGP
Manjusha Rai	Team Member	Consultant	Urban Planner	GSUGL
Pier Francesco Mantovani	Team Member	Lead Water and Sanitation Specialist	Lead Infrastructure Specialist	GWADR
Rainer Florian Behnke	Team Member	Consultant	Sr. Energy Efficiency Specialist	GSUGP
Shyamal Sarkar	Team Member	Consultant	Sr. Water Supply Engineer	GWA06
Svetlana Nikolic-Brzev	Team Member	Consultant	Sr. Civil Engineer	GSURR
Tolkun Jukusheva	Team Member	E T Consultant	DRM specialist	GSURR
Zhanetta Baidolotova	Team Member	Program Assistant	Program Assistant	ECCKG
Alexander Skinner	Team Member	S T Consultant	Poverty Specialist	GPVGE

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required? Consulting services to be determined

I. STRATEGIC CONTEXT

A. Country Context

1. **The Kyrgyz Republic, with a GNI per capita of around USD 1,200 in 2013, remains one of the poorest countries in the Eastern Europe and Central Asia (ECA) region.** From 2002 to the Global Financial Crisis in 2008, the country experienced a period of rapid economic growth – with up to 9 percent growth rates – and a remarkable decline in poverty levels from 62.6 to 32.0 percent. The economy slowed in 2009 and 2010, but has recently recuperated to pre-Crisis growth levels. Between 2006 and 2011, economic growth was inclusive with consumption among the Bottom 40 percent (B40)’s income growing at a faster pace than the average. Despite this, economic growth remains volatile due to frequent internal and external shocks including natural disasters, social unrest, and food price increases. These have in recent years reversed the poverty reduction trend. In 2013, it was estimated that around 38 percent of the population lived in poverty and 2.8 percent lived in extreme poverty. In May 2015 the Kyrgyz Republic became a member of the Eurasian Customs Union (ECU) comprising Russia, Kazakhstan, Belarus, and Armenia. However, despite benefits from access to larger markets, the short-term effects on growth and trade of accession to the ECU are expected to be mixed. Looking forward, economic growth and poverty reduction will most likely be affected by the current economic situation in Russia that affects remittances to the Kyrgyz Republic.

2. **According to the 2009 National Census, about 35 percent of the Kyrgyz Republic’s total population of about five million lives in urban centers.** As with most countries with low urbanization levels, the Kyrgyz Republic’s urban population is growing fast, with annual growth rates of around 2.2 percent. The rapid growth of urban areas in the Kyrgyz Republic presents significant challenges as cities need to expand their infrastructure and services to absorb newcomers while ensuring that current infrastructure and service levels are maintained for the existing population. This requires having both the financial resources to expand and maintain urban infrastructure and services and the institutional capacity to plan and manage urban population growth. Urbanization is also generally linked to the transition from less productive (i.e., agriculture) to higher-productivity sectors (i.e., services, industry). In the case of the Kyrgyz Republic, estimates suggest that urban areas are 4.8 times more productive than rural areas. As such, urbanization, if well-managed, can play a central role in the economic growth of the country.

B. Sectoral and Institutional Context

3. **The country is facing significant challenges in providing quality municipal services exacerbated by the quickly growing urban population.** Municipalities, which are responsible for the provision of basic services such as water supply, solid waste collection, street lighting, and social infrastructure (i.e., schools), have been unable to provide quality services to meet growing demand. Piped water supply service outside of the capital is intermittent and commonly disrupted by chronic shortages or by distribution of non-compliant or unsafe water.¹ Solid waste collection coverage is inadequate – between 25-50 percent of the population in smaller towns receive regular service compared to about 96 percent of the population in Bishkek and 60 percent in Osh.² Waste collection equipment is outdated and inefficient with lengthy downtimes for repairs, and the

¹ World Bank (2014), *Managing Water in Central Asia – Note on Water Supply and Sanitation*.

² UNDP (2011), *Communal Services in Kyrgyzstan: A Poverty and Social Impact Assessment*.

sanitary conditions at communal collection sites are poor. In addition, there are important legacy challenges as a result of the poor infrastructure constructed during Soviet times. The majority of municipal buildings were constructed without regard to energy efficiency leading to high operating costs and low levels of comfort in extreme weather³ and have low resilience to seismic events.⁴ On average, it is estimated that around 20-30 percent of the heat demand in urban buildings in the Kyrgyz Republic remains unmet every year due to the high heat loss of buildings and unreliable, insufficient, or unaffordable heat supply. Additionally, a recent study revealed that more than 80 percent of schools and kindergartens in the country have low seismic safety ratings. Across all urban services, since the fall of the Soviet Union, infrastructure has suffered from decades of under-maintenance as municipalities have been unable to raise enough revenues to cover operation and maintenance (O&M) costs and lack enough resources to cover capital improvements. As an example, the investments needed to rehabilitate and expand the water supply and sanitation sector alone were estimated at USD 2.2 billion by 2030, which vastly exceeds current financing.⁵

4. Across all public services, service gaps are concentrated among the poor and the B40, and present a deteriorating trend.⁶ For example, while 71 percent of the upper 60 percent living in urban areas have individual water connections, only 33 percent of the B40 percent do; while only 9 percent of the upper 60 percent living in urban areas burn or bury their solid waste, 26 percent of the B40 percent do.⁷ The associated coping costs (i.e., fetching and boiling water) are disproportionately concentrated among the poor. A recent study estimated the annual economic impact of inadequate coverage and quality of water supply and sanitation services in the country to be USD 116 million.⁸

5. There are important institutional capacity gaps that limit urban areas in reaching their potential. Such constraints are present at the level of the national and local governments. At the *national level*, urban planning continues to follow the approach of traditional Soviet-era master planning, where national planning officers develop rigid master plans for Kyrgyz towns which are unrelated to market demand and local conditions. Beyond that, a combination of rapid rural to urban migration in post-transition years and the collapse of government-supplied housing resulted in government handouts of un-serviced land in the periphery of main urban center to in-migrants for housing construction.⁹ More recently, land management practices continue to favor the expansion of urban settlements following low-density patterns. This sprawled type of development has important consequences for the cost of expanding services to the growing population and may lock Kyrgyz cities into a resource-intensive development path. Unmanaged sprawl is also taking place at hazardous locations exposed to mudslides and floods. Such new developments at the outskirts of towns are prevalent not only in large cities like Bishkek, Osh, and Jalal-Abad, but in smaller towns as well. At the *local level*, municipalities and service providers often lack both the

³ Estimates reveal that while the public sector accounts for only 10 percent of total electricity consumption, its consumption grew by more than 37 percent between 2009 and 2012. This increase is partially driven by the low energy efficiency of municipal infrastructure since the majority of public buildings in the Kyrgyz Republic were constructed during the Soviet era without energy efficiency considerations. Due to insufficient resources, public buildings are poorly maintained and often under-heated as a result of high heat losses and the dilapidated condition of the heating infrastructure.

⁴ The entire territory of the Kyrgyz Republic is subject to high seismic hazards. The current seismic map of the country classifies settlements based on expected seismic intensity according to the Medvedev–Sponheuer–Karnik (MSK) scale; the majority of the territory of the country is classified at the 6, 7, 8, 9 or higher macro-seismic intensity scale.

⁵ World Bank (2014), *Managing Water in Central Asia: Impacts and Costs of Water supply and Sanitation Scenarios*

⁶ In 2011, 11 percent of the urban poor had access to running water, down from 33 percent in 2005.

⁷ From Household Budget Survey data (2012).

⁸ World Bank (2014), Kyrgyz Republic Public Expenditure Review Policy Note: Intergovernmental Fiscal Relations.

⁹ World Bank (2007). Kyrgyz Republic, Urban “Novostroiki” Settlements: Issues and Options.

human skills and management tools to improve their financial performance and operational efficiency. As an example, many smaller towns in the country continue to rely on non-electronic billing and collection systems and manual, paper-based asset management systems. Furthermore, many service provision entities continue operating with outdated practices as they have had little exposure to contemporary practices, some of which have been successfully implemented in neighboring countries (e.g., demand-side water management measures in Tajikistan).

C. Government Strategy

6. The National Sustainable Development Strategy (NSDS) for the Kyrgyz Republic 2013-2017 identifies support to local governments as a key area of development. The Strategy emphasizes the importance of improving the system of delivery of municipal services (water supply, waste collection, etc.) and recognizes the objective to achieve financial sustainability and effective management of resources at the local level. The Strategy identifies the need to strengthen the role of state and local authorities in energy conservation and energy efficiency, and create an environment that promotes energy-efficient technologies. The Strategy recognizes that the Kyrgyz Republic is prone to natural calamities, including high seismic activity, and emphasizes the need to increase risk reduction practices and improve preparedness for disaster events and emergencies.

7. The country has started putting in place some of the building blocks needed to implement the NSDS. On the institutional side, in June 2013 the Government assigned to State Agency for Architecture Construction and Communal Services (SAACCS), previously the agency in charge of architecture and construction permits, the role of formulating and developing policies in the areas of urban development, housing, and communal services. In September 2014, under the auspices of SAACCS, the Government approved the State Program for Development of Water Supply and Sanitation in Kyrgyz settlements for the period of 2014-2024. The Program identifies the main directions and activities for the development of the water supply and sanitation sector, with the primary objective to “improve the quality of water supply and wastewater disposal” in Kyrgyz settlements. SAACCS has also embarked on a process to develop a long-term strategy to adjust the state urban planning system and align it with contemporary practices involving flexible, market-led approaches to planning. Progress has also been made in advancing the energy efficiency and seismic resilience agendas. In 2011, the Government passed an energy performance law for new buildings and retrofits,¹⁰ and all municipalities are now required to develop local energy-saving plans. In July 2015, the Government issued a resolution aimed at improving safety in schools and preschools.¹¹ Efforts are currently under way to mobilize financing for seismic retrofitting. To date, no school or other public building has been integrally retrofitted to improve its energy efficiency and seismic resistance.

D. Rationale for Bank Involvement

8. The Bank has a long history of engagement in the municipal services sector of the Kyrgyz Republic. This includes the recently-closed Small Towns Infrastructure and Capacity Building Project (STICBP), the Bishkek and Osh Urban Infrastructure Project (BOUIP), and BOUIP

¹⁰ The law governs energy assessment inspections procedures as well as labeling requirements.

¹¹ The Government-issued Resolution No 551 (30 July 2015) sets the framework for the “Safe Schools and Pre-Schools in the Kyrgyz Republic State Program (construction, reconstruction, retrofit and overhaul).” Within the framework of this program, 2101 schools and 777 kindergartens (2,878 in total) are scheduled to be retrofitted or reconstructed in the period 2015 to 2024. The required budget for the program is 47.61 billion KGS (USD 732.46 million). According to the Resolution, it is planned that 60 percent of the overall funding will be provided by international sources, with the remaining 40percent drawn from national sources.

Additional Financing (AF). The previous projects aimed at improving municipal infrastructure, such as water supply, street lighting, roads, and social infrastructure, as well as building capacity across the cities of the Kyrgyz Republic. The BOUIP AF project, expanded the work done under STICBP and BOUIP, and is expected to close in December 2015. Due to this long and successful engagement, the Government has requested the Bank to continue supporting the sector, and consider, on a pilot basis, the improvement of both seismic resistance and energy efficiency of municipal infrastructure with a focus on social objects. The proposed Urban Development Project (UDP) is designed to take into consideration the above-mentioned challenges, and provides an opportunity to extend Bank support to towns that are experiencing important development pressures (e.g., population growth), have large gaps in service provision and lack the financial means to bridge these gaps. The project will also complement infrastructure improvements with capacity building activities with the aim of enhancing the operational efficiency of service providers. In addition, the project builds on the Bank's strong engagement in the energy sector. Improving the energy efficiency of public buildings is one of the key recommendations of a recently-completed urban heating and energy efficiency assessment by the Bank. The Bank also has had a long engagement in the Kyrgyz Republic under the Global Facility for Disaster Risk Reduction (GFDRR) in providing technical assistance and capacity building in the areas of disaster preparedness and response. The UDP will be the first project supported by the Bank that will pilot seismic retrofitting in the country.

E. Higher-Level Objectives to which the Project Contributes

9. The proposed UDP is included in the current Country Partnership Strategy (CPS) for the Kyrgyz Republic (FY2014-2017) of June 2013 (Report No. 78500-KG). The project is linked to the third area of engagement of the CPS and the country's development goal to 'ensure sustainable urban development and communal services.' The Project Development Objective (PDO) is in line with the country's development goal as it aims to improve access to basic services such as water supply, solid waste management, and other urban infrastructure along with provisions for energy efficiency and seismic safety.

10. Link to the twin goals of poverty reduction and shared prosperity. Urban poverty has been included as one of the criteria for the selection of participating towns. In addition, activities in improving service delivery are expected to provide important benefits for the poor, who are disproportionately underserved and affected by the low quality of services and high coping costs (e.g., time used collecting water, working days lost due to illness). The SWIFT module¹² was incorporated as part of the baseline survey which was conducted during project preparation in the four participating towns. This module allows identifying the proportion of the poor and B40 among potential project beneficiaries and assessing, at project's completion, differences in project results across income groups. Results from the baseline survey are discussed in detail in Section VI. Appraisal Summary.

11. Links to Sustainable Energy for All (S4All) and Disaster Risk Resilience. Through its energy efficiency activities, the proposed UDP is expected to contribute to the S4All initiative, a goal of which is to double the rate of global energy efficiency improvement by 2030. Activities focused on increasing seismic resilience of social infrastructure are also expected to yield benefits through reducing vulnerability to earthquake events. In addition, a parallel activity, financed

¹² SWIFT (Survey of Well-being via Instant and Frequent Tracking) is a new household survey instrument that enables the estimation of poverty and shared prosperity in a very timely, cost-effective, and user-friendly manner.

through a GFDRR Trust Fund, will be developed during project preparation and is expected to contribute to the better integration of disaster risk reduction into urban planning.

12. **Link to the citizen engagement mandate.** The proposed project will ensure that mandatory citizen engagement requirements are met. It will significantly enhance the engagement of citizens in municipal functions and service delivery, provide new models of engagement in Kyrgyz Republic that will be shared through a network of municipalities, mainstream beneficiary feedback, and ensure the equal participation of women.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

13. The PDO of the proposed project is *to improve the quality of municipal services and pilot energy efficiency and seismic resilience retrofits of urban infrastructure in participating towns.*

14. This will be achieved through mobilizing financial resources, to (i) improve the quality of municipal services such as water supply, solid waste management, and street lighting; (ii) pilot energy efficiency and seismic resilience retrofits of existing social infrastructure such as schools; and (iii) strengthen the capacity of SAACCS in urban planning as well as the capacity of participating towns to deliver local services.

B. Project Beneficiaries

15. The primary beneficiaries are the inhabitants of participating towns, service providers, and the SAACCS. During project preparation, the Government prioritized four towns – Sulukta, Kerben, Baluckchy, Toktogul – to be included in the UDP on the basis of the following selection criteria: (i) municipal service access gaps; (ii) population and population growth change; (iii) geographical distribution; (iv) poverty concentration in urban areas; and (v) donors’ involvement in the sector. The project is expected to benefit 59,000 residents by improving water supply, solid waste services, street lighting, and by financing social infrastructure retrofits. Women and children (especially girls) will also be beneficiaries, given that the project is expected to reduce the burden of fetching, storing, and managing water for household use; provide secure and better managed solid waste collection services; improve the level of comfort in schools especially during winter months due to higher indoor temperature, better lighting and functionality; improve the seismic safety of schools; and improve lighting of roads and public spaces – all areas of activity where women are disproportionately affected. Participating towns will benefit from reduced energy expenses – allowing for funds to be reallocated for other uses – a renovated building stock, and improved functionality of buildings. Utilities in participating towns and the SAACCS are expected to be the main project beneficiaries of institutional strengthening activities developed under Component B.

C. PDO Level Results Indicators

16. The achievement of the objectives will be measured by the following anticipated results:

- (a) Duration of water supplied to households in project affected areas (hours per day)
- (b) Number of people in urban areas provided with access to regular solid waste

- collection under the project (core indicator);
- (c) Projected lifetime energy savings (mWh) (core indicator);
- (d) Number of units of social infrastructure with improved seismic resistance;
- (e) Number of project beneficiaries (gender disaggregated) (core indicator);

III. PROJECT DESCRIPTION

A. Project Components

17. Most activities to be financed under the UDP project have been identified. The project readiness for implementation is high and is discussed in detail in Section VI. Appraisal Summary. The Proposed project will consist of the following components:

18. **Component A: Urban Development (USD 12.8 million).** This component will finance activities aimed at improving service provision in participating towns. Participating towns are selected and prioritized based on their (i) municipal service access gaps; (ii) population and population growth; (iii) geographical distribution; (iv) level of poverty; and (v) existing donors' involvement in the sector. The selection criteria and process is described in more detail in Annex 2. This component is composed of the following sub-components:

(a) **Sub-component A1: Municipal Services (USD 9.0 million).** This sub-component will finance activities for the upgrading and/or expansion of municipal infrastructure in the areas of water supply, solid waste management, and street lighting. Specific activities identified during preparation include activities aimed at improving water supply (Kerben, Sulukta), switching to more energy-efficient street lighting options (Toktogul and Baluckchy), and improving solid waste collection service in most participating towns. Feasibility Studies for water supply activities in Kerben and Sulukta and street lighting rehabilitation in Toktogul and Baluckchy are underway and detailed designs are expected to be developed shortly.

(b) **Sub-component A2: Safe and Energy Efficient Social Infrastructure Pilot (USD 3.8 million).** This sub-component will focus on improving the seismic safety and energy efficiency of social infrastructure. Activities will include retrofitting of school buildings to improve their energy performance, increase comfort levels and strengthen their seismic resistance. Since energy efficiency improvements and seismic rehabilitation of social infrastructure have not yet been carried out in the Kyrgyz Republic, this sub-component is designed to demonstrate the benefits associated with energy efficiency improvements (e.g., energy savings, social co-benefits); build market capacity for preparation and implementation of energy efficiency improvements and seismic rehabilitation of public buildings; enhance awareness of such activities; and establish institutional capacity in participating towns to incorporate energy efficiency as part of their investment planning. The pilot buildings have been selected based on agreed criteria (see Annex 2). Pre-feasibility studies are being conducted in these buildings to identify the most viable energy efficiency measures. Economic and financial analysis of identified activities have been conducted to assure that benefits streams outweigh project costs. A feasibility study analyzing options for seismic retrofitting and detailed designs is expected to be completed shortly.

19. Component B: Institutional Strengthening (USD 0.7 million). This component will support the Government's urban policy reform agenda at the national level with specific interventions at the local level aimed at strengthening service provision capacity in participating towns. At the *national level*, the project will support SAACCS in the formulation of urban policy objectives and priorities, embodied in an urban policy development *roadmap* endorsed by key stakeholders. The *roadmap* will not intend to be a full-fledged urban policy but to outline key development guiding principles and objectives, supported by main stakeholders, to improve urban and spatial development in the Kyrgyz Republic. While the project will provide assistance to strengthen the capacities of SAACCS, analytical activities underpinning the development of policy objectives as well as some of the institutional strengthening activities targeting the Urban Policy Technical Working Group¹³ will be complemented by a separate grant-funded activity through GFDRR which aims at strengthening disaster resilience through urban planning and also by a grant-funded program by the Korean Green Growth Trust Fund (KGGTF) which provides technical assistance to move towards a greener urban development of cities in the country.

20. At the *local level*, activities will include: (i) development of Performance Improvement Plans¹⁴ for utilities in participating towns; (ii) targeted technical assistance (TA) and training for the institutional strengthening of participating towns to improve the quality and efficiency of services provision, promote satisfactory operation and maintenance of existing assets and project activities (in water supply, solid waste, and energy efficiency of municipal infrastructure), and support participating towns to build municipal dialogues to address local needs; (iii) the procurement and installation of financial management and planning tools (i.e., automated customer registers, billing and collection) to improve the managerial and revenue generation capacity of participating towns; and (iv) development of energy savings action plans in participating towns building upon the urban energy efficiency assessment undertaken with the Tool for Rapid Assessment of City Energy (TRACE) during project preparation. Institutional strengthening activities at the local level will be complemented by a separate grant funded by ESMAP to strengthen the local capacity to plan and implement energy efficiency activities. The latter includes training for local service providers on how to conduct energy audits and for design and construction companies on the design and implementation of energy-efficient retrofits.

21. Component C: Implementation Support (USD 0.9 million). This component will support implementation of the project including: (i) contracting of local experts to assist the implementation unit and participating towns in the implementation of the project activities, (ii) the maintenance of the Monitoring and Evaluation System (M&E), created under the BOUIP project, to continuously monitor and evaluate the performance and results of the project; (iii) the project-related operating costs of the implementing unit including consulting fees and in-country travel expenditures; (iv) project operating costs including contributions towards the cost of backstopping assistance by ARIS staff (the so-called administrative pool of ARIS); and (v) an annual audit of project accounts.

¹³ The Urban Policy Technical Working Group comprises of government agencies and stakeholders active in the field of urban development. It is described in the Implementation Section of this PAD.

¹⁴ Performance Improvement Plans will outline a series of targets in the short and medium term to improve water utilities' performance and will include specific actions needed to reduce water losses, improve quality of services, increase overall operational efficiency cost-recovery.

B. Project Financing

22. The total cost of the project is USD 14.4 million, to be financed through USD 6.6 million equivalent IDA Credit, a USD 5.4 million equivalent IDA Grant, and a USD 2.4 million equivalent Government contribution.

23. Project preparation was supported by a USD 0.58 million ECAPDEV Grant to the Kyrgyz Republic, which allowed the hiring of consultants needed to carry out the preparatory work. Project preparation also benefited from studies supported by the GFDRR and ESMAP.

Table 1: Estimated Project Costs and Indicative Financing
(in USD millions equivalent and percentage of total)

Project Components	Total Cost	IDA Credit Financing	IDA Credit % of Total	IDA Grant Financing	IDA Grant % of Total	Government Contribution Financing	Government Contribution % of Total
1. Component A: Urban development	12.8	6.6	52%	3.8	30%	2.4	19%
Sub-component A1: Municipal Services	9.0	6.0	67%	3.0	33%	0	-
Sub-component A2: Safe and Energy Efficient Social Infrastructure	3.8	0.6	16%	0.8	21%	2.4	63%
2. Component B: Institutional Strengthening	0.7	-	-	0.7	100%	0	-
3. Component C: Implementation Support	0.9	-	-	0.9	100%	0	-
Total	14.4	6.6		5.4		2.4	

C. Lessons Learned and Reflected in the Project Design

24. Several lessons learned from previous Bank-financed projects¹⁵ highlighted in Implementation Completion Reports from the Kyrgyz Republic and elsewhere are reflected in the project design as follows:

25. *Lesson 1: Limit the number of project beneficiary towns to achieve greater impact with available funds.* Earlier lessons from the STICBP reflected the importance of focusing activities in fewer towns to achieve both a higher Economic Rate of Return (ERR) and greater impact. Based on this lesson, during project preparation the decision was made that UDP activities should be limited to small towns and main activities should focus on four participating towns, given available resources.

26. *Lesson 2: While new technologies significantly improve the availability of services and operation of utilities, capacity building should be an integral part of project design.* The use of modern technology (e.g., energy-efficient water pumps) has had significant impact on improving

¹⁵ Including STICBP approved in December 2004, the Second Village Investment Project approved in August 2006, the Second Rural Water Supply and Sanitation Project approved in April 2009, and BOUIP and BOUIP AF approved in December 2011.

the efficiency and sustainability of service provision. However, increasing the knowledge to install, operate, and maintain new systems is vital for utilities, operators, and local governments in order to keep up with proper operation and maintenance of installed equipment. An assessment of existing technical and institutional capacity in participating towns was made during project preparation and based on this, Component B – Institutional Strengthening – includes a number of activities aimed at improving both existing tools (e.g, billing systems) and the technical and managerial capacities of utilities in beneficiary towns.

27. Lesson 3: Strengthening local engineering-design capacities should be an important element of capacity building efforts to enhance technical sustainability of activities. Given the low technical design capacities in the Kyrgyz Republic, it is important to foster the acceptance of international expertise and standards and to mobilize this expertise in partnership with local firms to build capacity. As part of the UDP preparation, trainings on development of Energy Audits, design, and construction of energy efficiency retrofits were delivered to both private sector developers and local stakeholders. Training on technical supervision of building retrofits and water supply system rehabilitation was also delivered. Capacity building activities will continue to be supported during project implementation through Component B.

28. Lesson 4: Certain technical options for service provision have been linked with greater willingness to pay for services. The culture of not paying for services in many Kyrgyz towns remains a challenge for the financial sustainability of service providers and infrastructure. However, in the case of water supply, the provision of individual household connections has proved to be an important factor in determining whether or not people pay for services. Water supply activities made under the UDP will prioritize the use of individual metered connections.

29. Lesson 5: Engaging citizens about service delivery improvements by decentralized local government is a critical step in building trust and partnership strategies. Engaging citizens at the local level provides an opportunity to make local service delivery more accountable, more responsive to local needs, and more sustainable. Constructive citizen-municipal partnerships provide models for other service delivery sectors.

30. Lesson 6: There is a need to transition towards more modern and better recognized practices in design and design standards. The current technical code in the Kyrgyz Republic provisions high per capital production rate. The code was updated during the recent rural water supply project supported by the Bank. Assistance under the current project will be provided on commonly accepted international practice and norms for urban settlements with similar characteristics.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

31. The UDP will be implemented over a period of four years commencing in September 2016, the planned date of effectiveness of the IDA Grant and IDA Credit. The Mid-Term Review (MTR) will be conducted no later than September 30, 2018. The implementation support plan is detailed further in Annex 4.

32. The key counterparts for the proposed project are the Ministry of Finance (MoF), SAACCS, participating towns, and utilities of participating towns. All parties have agreed that the Community Development and Investment Agency (*Agentstvo Razvitiya I Investirovaniya*

Soobschty Kyrgyzkoi Respubliki – ARIS) would be responsible for project preparation and implementation given its long experience with Bank-financed operations and capacity in following Bank procurement, financial management and safeguard procedures. ARIS will carry out project implementation in close cooperation with the participating towns and key project counterparts. Institutional arrangements and responsibilities of the different institutions are outlined below.

33. Ministry of Finance (MoF). The borrower will be the Kyrgyz Republic, represented by the MoF. As the Borrower's representative, MoF's key responsibilities under the project will be to provide timely co-financing for the project in accordance with the Financing Agreement, and to ensure that the implementing agency carry out their responsibilities in accordance with the terms of the Financing Agreement. MoF will be in charge of approving the annual work plan and budget for UDP.

34. State Agency for Architecture, Construction and Communal Services (SAACCS). The SAACCS is the central government body with the mandate to develop policies in the urban sector, including urban planning and spatial development, energy efficiency, water and sanitation. As such, SAACCS has been providing policy guidance during the UDP preparation and will continue to guide project implementation. ARIS will share the annual work plan of UDP with SAACCS for information. ARIS will continue to consult SAACCS on all issues related to public policy, identification and prioritization of activities, technical specifications, and areas for capacity building and institutional strengthening. SAACCS, through its respective departments, will continue to join evaluation panels and comment on technical deliverables. SAACCS will provide overall coordination of stakeholders in the respective areas of urban services in relationship to the UDP. In addition, being the lead entity in setting the country's urban policy agenda, SAACCS will be one of the main beneficiaries of urban policy TA support included under Component B – Institutional Strengthening.

35. The Community Development and Investment Agency (ARIS). ARIS was in charge of the UDP's project preparation and will be responsible for the overall implementation, including fiduciary and safeguards compliance, of the proposed project. ARIS was created by Decree of the President of the Kyrgyz Republic in October 2003 as a legally and operationally autonomous institution for the purpose of managing the implementation of the IDA supported First Village Investment Project (VIP I). It operates under the oversight of a Supervisory Board comprised of 21 representatives of the State administration, the local government sector, and the civil society. ARIS has been responsible for management of other Bank projects.¹⁶ For purposes of the UDP's implementation, ARIS will maintain a project coordinator, two municipal engineers, a procurement specialist, a financial management/disbursement specialist, a safeguards specialist (on a half-time basis), an institutional development specialist, and a monitoring and evaluations specialist. The institutional development specialist and the M&E specialist will be jointly responsible for public engagement and communications. Other ARIS staff (e.g., ARIS' Administrative pool) will provide backstopping support on a need basis.

36. In its position as the lead implementing agency for UDP, ARIS will be responsible for and carry out all project implementation in accordance with the Operations Manual (OM), which will be prepared and adopted shortly. This will include procurement, financial management and accounting, social and environmental safeguards, and citizen communication as well as routine

¹⁶ First, Second and Third Village Investment Projects (VIP I, II and III), STICBP, BOUIP, and the newly-approved Third Rural Water Supply and Sanitation Project.

communications with the Bank. Participating towns and their utilities will be closely associated with all decisions regarding procurement, contract execution, site supervision, and authorization of payments to contractors. Relations between ARIS and the participating towns and the assignment of project implementation responsibilities will be governed by a Cooperation Agreement,¹⁷ which ARIS will enter into with each participating town.

37. Participating towns. These include the towns of Sulukta, Kerben, Baluckchy, Toktogul.¹⁸ The Mayor's office will take the lead on behalf of the participating town in participating in project implementation. In cases where the UDP supports the local water utility (vodocanal), that utility will be closely involved with all technical aspects on behalf of the participating town. The municipal departments responsible for urban services will be engaged in review of all technical aspects under UDP within their prerogatives. Specifically, they will review and comment on all technical specifications and terms of reference, join evaluation panels, review and comment on technical reports and deliverables, exercise supervision and oversight and participate at key points such as testing or commissioning of assets. The Mayor's office will be responsible for obtaining any required approvals from the Town Council. The Mayor's office will also be responsible for holding annual citizen engagement meetings together with providing information for citizens' campaigns which explain to all stakeholders the project's goals, benefits and implementation progress; disseminating and addressing feedback from community monitoring of services under improvement, as well as grievance redress mechanisms. The Mayor's office will ensure equal participation of women in all community engagement processes. Specific responsibilities will be further defined in the OM.

38. Urban Policy Technical Working Group. A Technical Working Group (WG) has been established as part of the Building Urban Resilience activity (funded by the GFDRR) and will continue to serve as a platform for technical urban policy discussions. The WG is chaired by SAACCS Deputy Director and composed of representatives of the Urban Design Institute, the Department of Architecture, the Planning and Territorial Development, the Architects Offices of the Municipalities of Bishkek and other towns, the Mayor's Office of Bishkek, the Urban Initiatives NGO and the Agency for Local Self-Government and Ethic Affairs. Representatives from the Ministry of Economy and the Prime Minister's office have also been invited to join the WG. In addition, the WG will inform and seek validation from the recently launched high-level Governmental Commission to support the social and economic development of cities within the Kyrgyz Republic. This commission is led by the First Deputy Prime Minister with participation of several ministries, such as Ministry of Economy, MOF and SAACCS.

¹⁷ Similar agreements guide the relationship between participating towns and ARIS under BOUIP. A model Cooperation Agreement will be included in the project Operational Manual.

¹⁸ During the UDP's preparation, eligibility criteria were developed and included poverty levels; access to basic services including water, sanitation and solid waste; and population and population growth of medium-sized towns (towns with population above 10,000 and below 100,000). Other donors' current and planned engagements were taken into consideration with the objective to distribute the assistance more evenly. To meet government priorities, consultations were held with MoF, SAACCS, the Regional Development, Transport, Construction and Communications Unit at the Prime Minister's Office (PM Office), the State Agency for Local Self-Government and Inter-ethnic Relations, and the Ministry of Education. Following intergovernmental consultation, and in line with developed eligibility criteria, the Government has identified the towns of Sulukta, Kerben, Baluckchy and Toktogul as participants. Given the small scale of financing within the UDP, the project does not envisage investing in more than four towns. Project identification and preparation activities in the identified towns have commenced prior to appraisal with funding from ECAPDEV Trust Fund allocated for the purpose of the UDP's preparation.

B. Results Monitoring and Evaluation

39. At the project level, ARIS, working in close collaboration with the participating towns and their utilities to collect data, will be responsible for monitoring and evaluation (M&E) of the project towards achievement of its objectives. It will prepare and submit to the Association bi-annual reports to monitor project progress on the basis of performance indicators defined in Annex 1. The frequency and methodology for collection of project performance data is outlined in the Results Framework matrix. A Baseline Assessment – including a household survey and focus group discussion with potential project beneficiaries – was conducted in Kerben and Sulukta and will be used as baseline for pre-project conditions. A follow-up assessment will be conducted prior to project closure. In addition, consumer satisfaction surveys in the buildings selected for energy efficiency upgrades will be conducted pre- and post-renovation in order to assess satisfaction levels and capture co-benefits associated with the activities. The baseline for energy consumption in to-be-retrofitted buildings and street lighting was obtained through energy audits. For each building a verification energy audit/energy savings commissioning report will be prepared to compare energy use and patterns and determine actual energy savings for reporting purposes. In addition to the specific monitoring indicators required as part of the formal Results Framework for the project, ARIS will be required to monitor additional project implementation indicators as outlined in the Operational Manual.

40. ARIS has already established an M&E system to capture and monitor results under ongoing projects. The M&E system in place is satisfactory. ARIS has an M&E officer who has been trained in monitoring and evaluation techniques and is expected to support the UDP on a full-time basis.

C. Sustainability

41. The long-term sustainability of the project will depend on several factors:

(a) National agencies and participating towns have all been engaged in the design of the project. They will continue to be part of project implementation and supervision. This will contribute to the ownership of project activities.

(b) Financial sustainability of the project will depend on the extent to which service providers in participating towns, supported by the broader institutional and political environment governing the sector, are able to move towards cost-recovery of at least operation and maintenance (O&M) costs. Currently, utility tariffs are below cost recovery and given political unrest in the recent past triggered by Government attempts to raise utility tariffs, it is unlikely they will be raised soon or by much. O&M cost could be controlled through improved efficiency of operations, including reduction in physical losses and improved demand-side measures. The project, will seek to support such measures by introducing metering and measures towards replacing communal standpipes with yard or household connections. In addition, the project, through Component B, will aim at strengthening the institutional capacity of service providers, including activities aimed at increasing revenue collection. Participating towns, through the signature of Cooperation Agreements, will commit to providing funding for O&M of improved infrastructure.

(c) The project will also seek to showcase an integrated retrofitting of public buildings for improved seismic safety and energy efficiency and has incorporated capacity building activities aimed at increasing local capacity to design and implement such projects. Assuming successful implementation, the approach can be replicated throughout the country.

(d) The project will seek to provide a platform for policy discussion on urban and spatial planning. Increased awareness and consensus-building among key stakeholders in this area is expected to have positive impact over the long-term on how urban master planning and urban development policies are formulated.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

42. The main risks to achieving the PDO and mitigation are:

(a) *Poor technical quality of works due to low capacity of local design institutes and contractors.* Particular attention will be paid during the preparation stage to ensure that designs are technically sound. Sufficient ECAPDEV funds have been mobilized that will fund designs, and if needed, international consultants will be engaged to strengthen the quality aspects. During project preparation, an in-depth capacity building training was conducted for design institutes, engineering consulting companies, and civil works contractors. During implementation, adequate supervisory arrangements will be put in place, especially in the case of school retrofitting, which involves both seismic safety and energy efficiency—a new area for the Kyrgyz Republic. Based on the complexity of civil works, international supervisory engineers (both individual and firm) will be involved to strengthen the supervision of civil works contractors.

(b) *Inability of local governments to assure sustainability of assets financed by the project.* Participating towns, through the Cooperation Agreements, will commit to providing funding for O&M of improved infrastructure. Participating towns through the Cooperating Agreements will cause their utilities to implement the Performance Improvement Plans. In addition, the project will include targeted technical assistance aimed at improving the managerial and technical capacities of participating towns and their utilities.

(c) *Limitations in demand-side management of water supply.* The project will initiate efforts to improve the demand-side management of water supply, such as measures to discontinue communal standpipes and replace them with household or yard-piped connections that are metered. However, given the experience in neighboring countries with similar socio-economic characteristics (Tajikistan), this may be a long and difficult process. Risks include possible public resistance to metering and the inability of households to finance the cost of connecting to the distribution line. The project will support social mobilization explaining the benefits of switching to a household-level connection, and will review the sub-region's experience with schemes towards mitigating the cost of connection to individual households.

(d) Some of the participating towns are located in border areas and conflicts have occurred in the past. During project preparation, the team carried out a Conflict Filter; its findings and recommendations have been incorporated into the project's design. During implementation, the risk of perceived inequities in the distribution of project benefits may aggravate social tensions. This will be mitigated by the citizen engagement framework utilized throughout project implementation; this will involve not only the development of a project-wide grievance redress system but also pro-active engagement and capacity building with various stakeholder groups.

VI. APPRAISAL SUMMARY

A. Project Readiness

43. The project locations and the majority of project activities that will be financed under the UDP have been identified. The four selected participating towns (Kerben, Sulukta, Toktogul and Baluckchy) were prioritized based on their municipal service access gaps, development pressure (growing population) and poverty levels, and taking into account existing donors' involvement in the sector. Feasibility Studies for water supply activities in Kerben and Sulukta and street lighting rehabilitation in Toktogul and Baluckchy (under Sub-Component A1) are underway and detailed designs are expected to be developed shortly. Equipment needs to improve solid waste collection in participating towns have been assessed. Pre-feasibility studies are being conducted in prioritized social infrastructure (under Sub-Component A2) to identify the most viable energy efficiency measures.¹⁹ A feasibility study analyzing options for seismic retrofitting combined with energy efficiency measures and detailed design is expected to be completed shortly. Specific activities to support the Government broad-based urban policy reform agenda at the national level (under Component B) are currently being identified with the support of KGGTF and GFDRR studies.

44. A baseline assessment was conducted during project preparation in Kerben, Sulukta, Toktogul and Baluckchy. The baseline assessment included an extensive household survey in the towns of Kerben and Sulukta which focused on capturing quality of municipal services prior to the project. Focus group discussions were held in all four towns. Results confirmed high levels of urban poverty in the towns of Kerben and Sulukta; 53 percent and 37 percent respectively. Significant differences in the quality of water supply services were found between poor and non-poor, with higher coping costs faced by poor households. No significant differences were found in quality of solid waste collection services between poor and non-poor. More details on the baseline assessment and main results can be found in Annex 5: Economic Analysis.

B. Economic Analysis

45. The economic benefits from the project will lead to improved quality of municipal service provision, including water supply, solid waste collection, street lighting, and social infrastructure. Improving these services will enhance welfare by reducing coping costs (e.g., time saved from

¹⁹ TRACE studies conducted during project preparation in participating towns identified public buildings and street lighting as the sectors with the highest energy savings potentials within municipal control. Criteria to include demonstration buildings in the safe and energy efficient retrofit pilot included: high social benefits and demonstration effect as reflected by the number of beneficiaries and; high energy savings potential, among others (See Annex 2 for more details). Based on these criteria, four schools and two kindergartens in Toktogul and Baluckchy were selected to be included in the pilot.

water collection, reduced need for in-house drinking water treatment). Activities in improving the quality of water supply are also expected to have welfare effects through improved health. Activities in improving energy efficiency and seismic resilience of social infrastructure are expected to improve the level of comfort of children and teachers and yield savings to participating towns which could be reallocated for other purposes while also reducing potential physical and human losses in an earthquake event. Improved street lighting is expected to yield benefits in the form of improved road safety and increased hours of operation of local business.

46. The project is expected to deliver substantial benefits by improving water supply services for approximately 40,000 residents in participating towns, 5,000 students through social infrastructure retrofit, and 15,000 residents through improved street lighting. Currently, households in the cities of Sulukta and Kerben are receiving water supply – on average – for 2-3 hours per day and have large seasonal variations both in water quality and quantity. As a result they have significant coping costs. The rehabilitation of the water supply networks is expected to lead to an increase in quality of services by increasing the amount of hours of supply and reducing seasonal variations.

47. The project's economic analysis relies on activities identified during project preparation to assess benefit and cost streams. It includes (i) the cost of all project components, including estimated O&M costs and project implementation costs and (ii) all measurable benefits, including decreases in the time spent collecting water; welfare gains at household level associated with reduced expenditure on water storage tanks, as well as need for in-house treatment (i.e., boiling of water); and energy savings linked to social infrastructure retrofits. Expected benefits are based on results observed from similar projects in the country, namely the STICBP and the Rural Water Supply and Sanitation Projects (RWSSP1 & 2). Benefits in the form of increased DALY²⁰ resulting from improved seismic resilience of social infrastructure have been taken into account but building reconstruction costs have not been considered. Reduced incidence of water-related diseases such as infectious hepatitis and acute enteric infections as a result of improved access to quality water and decline in the reliability on standing water sources were not taken into account, as they are usually difficult to measure. Health benefits linked to increased comfort levels in retrofitted social infrastructure were not take into account as well. Financial analysis of energy efficiency measures in demonstration buildings have been conducted to assure that benefit streams outweigh project costs. Given the difficulty in estimating economic benefits, benefits linked to improved solid waste collection, improved street lighting, and activities developed under Component B (Institutional Strengthening) are also not taken into account. As with all economic analyses, the costs are perfectly observed while the benefits are not.

48. The estimated ERR is 16.1 percent and the NPV is USD 18.6 million, assuming a social discount rate of 5 percent²¹, 25 years of asset life in the case of water supply systems and social infrastructure, and 15 years of asset life for street lighting activities, including four years of project implementation, with corresponding benefits to be realized starting in 2021. Given the conservative assumptions used, and the fact that no benefits could be accounted for under Component B, the project's NPV and ERR are expected to be even higher than those estimated. Annex 5 contains more detailed information on the project's economic analysis.

²⁰ Disability Adjusted Life Years.

²¹ As per new Guidelines a 5 percent Discount Rate is recommended for project evaluation - *Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects*

C. Technical

49. Background analysis that informed project preparation and design. During project identification and preparation, ARIS conducted a preliminary technical assessment of municipal services and local governments' capacity that covered the following: (i) solid waste management; (ii) water supply and sanitation; (iii) municipal roads and related infrastructure; (iv) municipal finance and management; and (v) city energy assessment and energy efficiency of social objects. In addition, rapid inspection of school buildings was undertaken to assess their structural and seismic safety. The assessments identified needs and priorities for activities and TA in each of the towns. Based on identified priorities, taking into account other donors' ongoing and planned involvement, and in consultation with national and local authorities, it was agreed that UDP will support the improvement of water supply in the towns of Sulukta and Kerben; the improvement of energy efficiency of social objects in Baluckchy and Toktogul; the improvement of collection of solid waste in most towns; improving the energy efficiency of street lighting infrastructure in Baluckchy and Toktogul; TA for participating towns and service providers aimed at improving their performance; and TA for SAACCS in the areas of urban planning and spatial development.

50. Improvement of municipal utility services. The water supply systems in Kerben and Sulukta are fed by a combination of surface and ground water. System facilities include water intakes and deep wells, reservoirs, boosting stations, and somewhat extensive distribution networks that supply water to institutions, individual households and communal standpipes. The water catchment in both towns has deteriorated and operates below installed capacity; distribution networks are aged resulting in physical water losses; and water treatment does not take place. The quality of service is therefore low in terms of hours of operation and chemical/bacteriological content. Commercial practices followed by the two utilities are inefficient. There are few production meters and no individual meters to regulate demand. During project preparation, a feasibility study was initiated with ECAPDEV funds, which will identify the most critical priority activities in both towns. Detailed designs are scheduled to be prepared shortly. Such activities may include rehabilitation of the water intake infrastructure (up to its original designed capacity) and critical segments of the distribution network and facilities; improvement of commercial practices (billing and collection); discontinuation of "goosehead" standpipes without control valves; and replacement of communal standpipes with household standpipes.

51. Seismic and energy efficiency retrofits of social infrastructure. All social infrastructure buildings identified during project preparation were constructed during the Soviet period without any energy efficiency considerations. Due to insufficient budgets, the buildings have been poorly maintained and are often under-heated as a result of high heat losses and the dilapidated condition of the heating infrastructure. Energy audits carried out during project preparation revealed that energy consumption could be reduced by a minimum of 30 percent through basic energy efficient retrofits. The proposed project will implement standard, well-proven technologies for energy efficiency improvements. Specific measures for each building will be determined based on energy audits and detailed construction designs. Major measures will include improvements in building envelope (insulation of walls and roofs, replacement of windows and exterior doors), heating system upgrades (renewal of heat piping, upgrade/replacement of boilers, installation of heat pumps), and indoor lighting (compact fluorescent lamps, light-emitting diodes). The viability and use of renewable energy (e.g., solar-powered heat pumps or wind-based renewable solutions) will

be reviewed as part of the energy audits. All identified buildings were reviewed for structural integrity and safety, and they appear to be able to sustain applied structural loads, including wind and snow loads. However, the territory of the Kyrgyz Republic is subject to high levels of seismic activity and all buildings in the country are likely to be exposed to earthquakes. The identified buildings, along with more than 80% of schools and kindergartens in the Kyrgyz Republic are classified as having “low seismic safety.”²² The proposed project will, therefore, improve the seismic safety of schools in addition to improving their energy efficiency. Specific measures will be identified during the feasibility stage that will be initiated shortly, and are likely to involve the construction of new reinforced concrete skin for the exterior of buildings and to selective interior walls of buildings.

52. Both seismic and energy efficiency retrofitting of social infrastructure is new for the Kyrgyz Republic. The proposed project will finance the first such improvements, which will be done on a small, pilot basis to ensure that lessons learned are captured and market capacity is gradually developed.

53. Improvement of solid waste collection activities. Currently, solid waste collection in the participating towns is sporadic and inefficient. As a result, many institutional and individual generators burn their waste creating an environmental nuisance. Collection is performed directly by the towns using truck fleets comprised of various types of vehicles (hydraulic compaction trucks, container trucks, dump trucks, tractors with or without trailers). The truck fleets are outdated and inefficient, with significant downtime for repairs, and are often utilized for other municipal services as well. The project will seek to improve the collection capacity of the towns by procuring collection equipment that is simple to operate and maintain. Since curbside collection is often performed in the participating towns, and the population is used to it, the project will likely support similar systems that have lower depreciation and maintenance costs.

54. Improvement of street lighting infrastructure. For street lighting, switching from mercury to LED lighting will provide more than 40 percent in electricity savings while at the same time will increase lighting levels, reduce the need for maintenance, and increase the lifetime of the bulbs. Currently, towns often lack the resources to perform proper maintenance and replacement of defective bulbs due to highly constrained budgets. The pre-feasibility study for street lighting will be completed shortly; design documentation will be prepared during project implementation.

55. Construction supervision. Based on detailed review of recent experiences with construction supervision and quality control of Bank-financed project activities by ARIS, and considering the limited options for construction supervision with enhanced quality control arrangements available in the Kyrgyz Republic, the following arrangements will be followed: (i) construction supervision for the rehabilitation of schools will be done by an engineering company with some international input due to the novelty of both seismic retrofitting and combined seismic and energy efficiency retrofitting; (ii) street lighting activities are simple in nature and could be supervised directly by ARIS engineers; and (iii) rehabilitation of water supply systems is also an area where ARIS has built experience and could supervise directly. However, a more profound system of supervision must be established, including an internationally-recruited supervision engineer on a part time basis, certified site engineers and a pool of qualified experts (i.e., hydro-geologist, quality control engineer, electrical engineer, etc.) engaged for a short period of time on an ‘as-needed’ basis per pre-approved construction plans. Further detail on these arrangements is provided in Annex 3.

²² UNICEF (2014) *Assessment of Safety of School and Pre-School Education Institutions in the Kyrgyz Republic: Summary Report*.

D. Financial Management

56. The project's FM assessment established that the FM arrangements existing in ARIS meet IDA requirements. The assessment took into account ARIS' significant past experience in implementing Bank-funded projects, including adequate staffing of the FM function and documentation of the financial management arrangements in the Financial Management part of the draft OM. FM arrangements, including budgeting and planning, internal control procedures, and staffing of the FM function are adequate. With respect to accounting and reporting, ARIS will use the system based on the existing accounting software, which will be modified for the accounting and financial reporting purposes of the UDP. The accounting software is specifically designed to meet World Bank-financed project requirements, including the ability to generate IFRs, attachments of withdrawal applications including SOEs, and annual financial statements. The annual audits of project financial statements will be provided to the Association within six months after the end of each fiscal year and at project closing. The Recipient has agreed to disclose the audit reports for the project within one month of their receipt from the auditors by posting the reports on the ARIS website. Following the Association's formal receipt of these reports from the Recipient, the Association will make them publicly available according to the Association Policy on Access to Information. As part of the project's implementation support and supervision missions, quarterly IFRs will be reviewed and regular risk-based FM missions will be conducted. More details on FM arrangements are provided in Annex 3 and Annex 4.

57. Disbursements from the IDA Grant and Credit Accounts will follow the transaction-based method, i.e., traditional Bank procedures, including advances to designated accounts, direct payments, Special Commitments and reimbursement (with full documentation and against Statements of Expenditures - SOEs). The separate (Grant and Credit) designated accounts will be opened in a commercial bank acceptable to the Association. For payments above the minimum application size, which will be specified in the Disbursement Letter, ARIS may submit withdrawal applications to the Association for payments to suppliers and consultants directly from the Credit/Grant Accounts. Disbursement arrangements will be detailed in the Disbursement Letter.

58. The financial contribution by the Government will co-finance the cost of seismic and energy efficiency retrofits of social infrastructure (Component A2). All other project activities will be financed by IDA (Grant or Credit).

E. Procurement

59. A procurement capacity assessment was conducted for the UDP, which confirmed that the procurement capacity in ARIS is evaluated as sufficient for implementation. Procurement for the UDP will be carried out in accordance with "Guidelines: Procurement of Goods, Works and Non-consulting services under International Bank for Reconstruction and Development (IBRD) Loans and International Development Association (IDA) Credits and Grants by World Bank Borrowers," dated January 2011 (revised July 2014); "Guidelines: Selection and Employment of Consultants under IBRD loans and IDA Credits and Grants by World Bank Borrowers," dated January 2011 (revised July 2014); and the provisions of the legal agreement.

60. ARIS has been effectively managing procurement activities under BOUIP, VIP2 and the Second Rural Water Supply Project. The main office of ARIS is staffed by four well-qualified and

experienced procurement specialists, one of which will be dedicated to the UDP team. Seven small oblast-level liaison offices will ensure adequate coverage of the country and provide administrative and logistical support for ARIS field staff. Risk and mitigation measures were agreed and have been satisfactorily addressed by ARIS. The key issues and risks include: (i) potential risk of delays in the implementation of the project due to the complexity of procurement processes and decision-making that involves local governments and (ii) insufficient contract monitoring and contract management skills. The corresponding mitigation measures include: (i) ensuring the publication of procurement notices and contract award information as required by the Bank Procurement and Consultant Guidelines including publication on the E-GP website; (ii) preparation of a project OM that will include a procurement section detailing procurement arrangements and an independent complaint handling mechanism, including for contract management; (iii) enhanced contract management through the hiring of a qualified consulting firm for supervision of school modernization; (iv) all complaints received from any supplier or consultant relating to the procurement and contract management process shall be recorded, sent to the Bank for information and addressed promptly and diligently; and (v) up-to-date procurement records shall be maintained.

61. The Procurement Plan for UDP has been drafted and will be updated at least annually, or as required, reflecting actual project implementation needs as well as improvements in institutional capacity. The Procurement Plan and detailed arrangements are presented in Annex 3.

F. Social (including Safeguards)

62. **Citizen engagement.** A process of consultation adopted by the PIU – involving site visits, public meetings involving CSOs, and consultations with local officials and groups of community members – has been used to engage citizens in the selection of activities. It is intended that this be significantly enhanced during implementation through a project citizen engagement (CE) framework that establishes citizen engagement processes at three levels. A gender-disaggregated citizen engagement indicator is included in the Results Framework to measure the effectiveness of project interventions and processes. The framework of CE activity includes:

- (a) *An “information for citizens” campaign.* The project will actively communicate project information (objectives, standards, processes, outcomes), and provide support for awareness-building to ensure the informed engagement of citizens.
- (b) *Public dialogues and stakeholder engagement with municipal councils.* Citizens will be formally engaged through the council structures in each participating town. The project’s progress, standards/targets and budgets/expenditures, complaints, and other citizen feedback will be disclosed through open dialogues set up for this purpose, as well as being discussed in regular or semi-annual Council meetings.
- (c) *Enhancing community voice.* With the aim of strengthening their ability to facilitate their feedback and pro-actively represent their communities, the project will support the development of “active citizen moderators”. In each community, citizens (both men and women) will be nominated by their communities. The moderators will receive training and learning-by-doing facilitation on feedback instruments that will enable them to interface with all stakeholders in the project. In reaching out to communities, ARIS representatives often work closely with community “mediators”

who tend to be more socially active and more informed. The project will build on this practice, but shift gear to empower mediators in each target area.

- (d) *Association of Municipalities of the Kyrgyz Republic.*²³ Per the Association's stated goals – to foster exchange of knowledge and information among its members – the project will engage with the Association of Municipalities to disseminate information on project objectives, benefits, processes, and results, and exchange information on best practices for energy efficiency, waste disposal and other municipal services.

63. A Conflict Filter²⁴ analysis undertaken for the UDP during preparation identified a number of conflict stressors in and near Kerben and Sulukta. These stressors include: low citizen trust in local governance, demographic change, competition for scarce resources (e.g., arable land, water, and housing), harassment by ill-trained law enforcement bodies, discontented youth, and unresolved inter-state border disputes. To mitigate these stressors, the project will conduct a Social Assessment (SA) to deepen understanding of the local socio-political context in the areas with highest conflict stressors and extensive activities under UDP; avoid activities near land disputed by the Kyrgyz Republic, Tajikistan, and Uzbekistan; engage with young citizens where possible; organize trainings on conflict resolution; and work with local peacebuilding organizations and community-based mediators whose knowledge of traditional mechanisms will help to gain community support and prevent violence. In addition, the SA with well-defined potential conflict stressors will be reviewed in conjunction with the review of technical feasibility studies with the purpose of guiding the identification of priority investments.

64. In addition to World Bank standard grievance redress mechanisms (see section I below) and access to national grievance redress mechanisms (for example, access to the legal system), the project will also include efforts to develop an effective project-specific Grievance Redress Mechanism (GRM). This GRM will be purposefully designed following a review of the GRM mechanism of the preceding project (Bishkek Osh Urban Infrastructure Project), and build on the lessons learnt of prior GRMs in the Kyrgyz Republic. It will be pro-active; will report on the way complaints are addressed; and results will be reported and tracked.

65. **Gender.** The project will include gender-disaggregated measures for the project's beneficiaries, and incorporate citizen perceptions of project activities and processes. During implementation, the PIU will ensure that participating towns provide for and measure equal participation of women through annual community monitoring (under Component A) in order that feedback on activities fully incorporates the perception of women and girls. Where necessary, separate focus groups will be held to ensure this engagement. Additionally, the PIU will establish and monitor the participation of female beneficiaries in capacity building activities and, where necessary, take corrective actions to meet agreed targets.

66. **Involuntary Resettlement.** The proposed project triggers the Operational Policy on Involuntary Resettlement (OP 4.12). Activities under UDP are not expected to trigger significant resettlement or land acquisition. Every effort will be made so that resettlement is avoided or minimized as much as possible. In the event that small scale resettlement is required, it was agreed that the primary obligation for resettlement compensation lies with local self-government bodies

²³ The Association of Municipalities is an organization of 25 elected city councils that aims to provide "assistance to socio-economic cultural development of local self-government, representation and advocacy of interests of the Association's members." The Website of the Association is <http://www.citykr.kg>

²⁴ The UDP has taken into account the findings of the Conflict Filter, a screening tool that is applied to World Bank-funded projects at the preparation stage.

(i.e. the Participating Towns). As the extent of resettlement will not be known until the details of each activity are finalized, the client has prepared a Resettlement Policy Framework (RPF) that describes the Bank's resettlement policy, any differences with national laws, and the requirements applicable to resettlement. It details valuation procedures, compensation, and a grievance redress mechanism. The RPF provides a framework for preparing Resettlement Action Plans (RAPs) for any future resettlement that is not currently identified. The PIU has carried out public consultations on the RPF to inform potential project-affected people (PAP) and other stakeholders about potential resettlement due to project activities and to obtain their feedback. The RPF has been disclosed via the World Bank's Infoshop and by the client on November 5th, 2015.

G. Environment (including Safeguards)

67. UDP will not finance any activity with significant or irreversible environmental impacts, and therefore has triggered OP 4.01 with classification as Environmental Category "B."

While the environmental impact of the proposed project will be largely positive, some adverse impacts may be generated. The identified positive environmental impacts of the project include (i) improved citizens' skills and awareness in planning and implementation of local activities, with particular attention to environment protection, and (ii) sustainable management of improved infrastructure by communities, which will bring environmental and social benefits related to natural resources management.

68. The potential estimated environmental issues associated with the small/medium scale activities for local communities will be limited to temporary nuisances resulting from construction activities, and may include: (i) increased pollution due to construction waste; (ii) generation of dust, noise, and vibration due to the movement of construction vehicles and machinery; (iii) associated risks due to improper disposal of construction waste and asbestos, or minor operational or accidental spills of fuel and lubricants from the construction machinery; (iv) improper reinstatement of construction sites upon completion of works. All these potential environmental impacts are readily identifiable, small in scale, and minimal in impact and can be effectively prevented, minimized, or mitigated by including into the work contracts specific measures to be taken by contractors under close supervision of compliance by ARIS. Use of construction materials that are hazardous to human health (e.g., asbestos,) will not be permitted. Old mercury bulbs will be collected by a specialized company and recycled/disposed of according to hazardous waste handling standards. Where such contractors may not be present in the Kyrgyz Republic, provisions will be made to attract contractors from the sub-region.

69. The footprint of the activities is not yet fully known and will be established upon completion of the feasibility studies and designs expected by the fall of 2016. This will allow launching rehabilitation works immediately after project effectiveness and will allow to respond to the urgency of improving the precarious conditions of the water supply systems in the participating towns. As identified during project preparation, baseline survey and community consultations, the condition of existing water supply is very poor, having high levels of turbidity and is considered unsafe for drinking purposes. As such, households are at risk of developing acute waterborne diseases and are, in addition, facing important coping costs which are disproportionately affecting the poor and vulnerable as well as women and children.

70. Effective measures have been put in place under the BOUIP to address and closely monitor the safeguards issues. An Environmental & Social Management Framework (ESMF) for the project consistent with Environmental Assessment (EA) requirements for both the Kyrgyz

Republic and the World Bank was prepared by ARIS and reviewed and approved by the Kyrgyz State Environmental and Technical Inspection and found satisfactory by the World Bank. A Russian-language version of the ESMF was disclosed in the country on December 2nd, 2015, and the English-language version was received by the Bank and sent to the Bank InfoShop on the same day. The ESMF will be incorporated into the OM. All activities must obtain the clearances required by Kyrgyz national regulations. Each activity to be financed under the project will be reviewed for safeguards risks in line with OP4.01.

71. Site-specific Environmental Management Plans (EMPs) will be prepared for each activity. Implementation of environmental mitigation and compliance measures during BOUIP was carried out by the contractors (construction firms) and monitored by ARIS staff (engineers). This practice will continue under the UDP. During activities implementation, ARIS will have overall supervision responsibility for ensuring that the measures indicated in the EMP are being properly performed. ARIS in collaboration with the local authorities of the participating towns and the Kyrgyz Forestry and Environment Preservation Agency will perform the activity's environmental monitoring during both construction and operation phases as specified in the monitoring plan of the EMP. Appropriate training on Bank safeguards will continue to be provided under the UDP to local officials, contractors, and community representatives.

72. The project will not finance Category-A activities, will not support activities that target natural habitats or protected sites, and will not finance those activities that can cause a significant loss or degradation of any significant natural habitat. The environmental screening process will check for the presence of physical cultural resources. In addition, chance find procedures will be included in all works contracts.

73. The project's activities aimed at improving the energy efficiency of urban infrastructure are expected to yield benefits in terms of Climate Change mitigation. However, as the Kyrgyz Republic energy supply is mainly based on hydroelectric power, and thus has low levels of carbon intensity, reduction of GHG is expected to be small (in the order of 50 tons of CO₂ per year). Increased comfort levels (i.e. indoor temperature during winter and summer) are however expected to contribute to Climate Change adaptation.

H. Other Safeguards' Policies Triggered

74. **OP 7.50 (Projects on International Waterways)**. OP 7.50 has been triggered because the project will finance the rehabilitation, improvement or minor additions/alterations to water supply schemes that use water from international waterways (in particular, the Padysha-Ata River which flows into the Syr Darya, which is shared between Kyrgyz Republic and neighboring Kazakhstan, Tajikistan, and Uzbekistan. However, project interventions are not expected to adversely affect water quality or quantity to downstream other riparian states. It is anticipated that the nature of Project activities will not (i) cause appreciable harm to the other riparian states as it will not adversely change the quality or quantity of water flows, and (ii) will not be appreciably harmed by other riparian state's possible water use. Infrastructure rehabilitation and modernization and water supply management improvements should increase system efficiency, thereby generating water savings and providing users with a reliable water supply. Further, the project aims to improve efficiency of water use and to substantially reduce high water consumption rates.

75. The Exception from the requirement to notify other riparians (notification requirements under OP 7.50) was granted on October 6, 2015 because the nature of the Project activities meet the policy requirements mentioned in paragraph 1 (i) and (ii) above.

I. World Bank Grievance Redress

76. Communities and individuals who believe that they are adversely affected by a World Bank (WB)-supported project may submit complaints to existing project-level grievance redress mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project-affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring
KYRGYZ REPUBLIC: URBAN DEVELOPMENT PROJECT
RESULTS FRAMEWORK

Project Development Objective (PDO): The PDO of the proposed project is <i>to improve the quality of municipal services and pilot energy efficiency and seismic resilience retrofits of urban infrastructure in participating towns.</i>											
PDO Level Results Indicators	Core	UOM	Baseline	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
				YR 1	YR 2	YR 3	YR4				
Indicator One: duration of water supplied to households in project affected areas	<input type="checkbox"/>	Hours	2h (summer) 3h (winter)	2h (summer) 3h (winter)	2h (summer) 3h (winter)	8h	8h	Annually	Water utility and end-of project beneficiary survey	ARIS	Number of hours of water supplied in project affected areas
Indicator Two: Number of people in urban areas provided with access to regular solid waste collection under the project.	<input checked="" type="checkbox"/>	Number	0	0	20,000	30,666	40,600	Annually	Local government and end-of project beneficiary survey	ARIS	Cumulative number of people in beneficiary towns that are provided with access to regular solid waste collection.
Indicator Three: Projected lifetime savings (mWh)	<input checked="" type="checkbox"/>	MhW	0	0	2,137	10,000	16,414	Annually	Energy Audit Before and After	ARIS	Projects lifetime energy savings directly attributable to the project, converted to MWh ²⁵ .
Indicator Four: Number of social infrastructure with improved seismic resistance	<input type="checkbox"/>	Number	0	0	1	2	3	Annually	Local governments	ARIS	Number of social infrastructure with improved seismic resistance
Indicator Five: Number of project beneficiaries Gender disaggregated	<input checked="" type="checkbox"/>	Number		0 0	530,000 15,000	40,000 20,000	59,327 29,663	Annually	Multiple	ARIS	Cumulative number of people who benefited from the project (among which female) ²⁶

²⁵ Lifetime energy savings include both those obtained from Street lighting activities and the energy efficiency retrofit pilot for social infrastructure.

²⁶ This includes beneficiaries from WSS, Street Lighting and Social Infrastructure retrofit activities.

Intermediate Results Indicators	Core	UOM	Baseline	Cumulative Target Values				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Comments
				YR 1	YR 2	YR 3	YR4				
Component A: Urban Development											
<i>Intermediate Result Indicator One:</i> Number of water utilities the project is supporting	<input checked="" type="checkbox"/>	Number	0	2	2	2	2	Annually	Local governments	ARIS	Number of water utilities supported under the project
<i>Intermediate Result Indicator Two:</i> Number of municipal infrastructure assets and facilities with increased Energy Efficiency	<input type="checkbox"/>	Number	0	0	2	3	6	Annually	Local governments	ARIS	Number of municipal infrastructure assets and facilities with increased Energy Efficiency
<i>Intermediate Result Indicator Three:</i> Streets with improved street lighting	<input type="checkbox"/>	Kilometers	0	0	5	10	14	Annually	Local governments	ARIS	Kilometers of Street Lighting improved in beneficiary towns
Component B: Institutional Strengthening											
<i>Intermediate Result Indicator One:</i> Electronic billing and collection system in place	<input type="checkbox"/>	Number	0	0	0	1	2	Annually	Local governments	ARIS	Number of service providers in participating towns
<i>Intermediate Result Indicator Two:</i> Number of towns with Energy Saving Plans	<input type="checkbox"/>	Number	0	0	1	2	2	Annually	Local governments	ARIS	Number of towns who have Energy Savings Plans developed under the project
<i>Intermediate Result Indicator Three:</i> Utility Performance Improvement Plan developed and endorsed	<input type="checkbox"/>	Number	0	0	0	1	2	Annually	Water utility	ARIS	Number of utility Performance Improvement Plans developed under the project

<i>Intermediate Result Indicator Four: Capacity of local governments/utilities improved through technical and managerial trainings</i>	<input type="checkbox"/>	Number	0	1	2	4	6	Annually	Local governments/utilities/ARIS MIS	ARIS	Measured through number of trainings to relevant staff
<i>Intermediate Result Indicator Five: Roadmap to improve urban planning and spatial development adopted by SAACCS and endorsed by the Urban Policy Technical Working Group</i>	<input type="checkbox"/>	Yes/No	No	No	Yes	Yes	Yes	Annually	SAACCS	ARIS	A roadmap to improve urban planning and spatial development is developed and adopted by SAACCS
<i>Intermediate Result Indicator Six: Percentage of beneficiaries reporting improvements in project results and processes (CE indicator).</i>	<input type="checkbox"/>	Percentage	0	0	40	60	70	Annually	Facilitated community scorecards in target areas	ARIS	Percentage of beneficiaries who are satisfied with project results and processes

Annex 2: Detailed Project Description

Kyrgyz Republic: Urban Development Project

The Proposed project will consist of the following components:

Component A: Urban Development (USD 12.8 million). This component will finance activities aimed at improving service provision in participating towns. On the basis of selection criteria developed during preparation, and in consultation with the Government,²⁷ four towns were identified for inclusion in the UDP: Sulukta, Kerben, Baluckchy, and Toktogul. Given the small size of financing within UDP, the project does not envisage activities in more than four towns. Selection criteria for participating towns include: (i) municipal service access gaps; (ii) population and population growth; (iii) geographical distribution; (iv) level of poverty; and (v) existing donors' involvement in the sector. This component is composed of the following sub-components:

Sub-component A1: Municipal Services (USD 9.0 million). This sub-component will finance activities for the upgrading and/or expansion of municipal infrastructure in the areas of water supply, solid waste management, and street lighting in participating towns. Specific activities identified during preparation include activities aimed at improving water supply (Kerben, Sulukta), switching to more energy-efficient street lighting options (Toktogul and Baluckchy), and improving solid waste collection service in most participating towns. Pre-feasibility and feasibility studies for all activities, as well as detailed designs for most activities, are being prepared during project preparation:

1. Improving water supply services in participating towns:

(a) Kerben is the administrative center of Aksy rayon of Jalal-Abad Oblast, located 220 km northwest from Jalal-Abad. Kerben's population in 2014 was 25,132, including the seven villages under municipal administration of which four take water from upstream. The main source of water is a river infiltration gallery and a spring catchment at the bank of the river Padysha-Ata (a tributary of Syr-Darya). The design capacity of this source was 50 l/sec year round, but the actual was reported to be about 30-35 l/sec during summer time and much less in winter. During winter, the water supply relies on a ground water source comprised of seven operating wells located in various sites of the town (producing in total 75-80 m³/h; however, no reliable metering data has been identified) and another eight wells that are out of order. Water from surface water intake is supplied via 17 km transmission main, made of AC pipes. The condition of the transmission line is unknown. There are six reinforced concrete reservoirs for storing water from surface water sources. Water from the wells is pumped directly into the network. The network, serving the towns and four suburban villages is about 108 km long, made of AC and metal pipes of d200-50 mm. The services are interrupted and usually last up to four hours per service area. There are some remote parts of the town that are not served. These often rely on tanked water. Out of Kerben Municipality's population of 25,132 there are 10,400 residential consumers of which 1,200 have individual connections. There is no metering and tariff collection is based on

²⁷ Consultations were held with MoF; SAACCS; the Regional Development, Transport, Construction and Communications Unit at the Prime Minister's Office (PM Office); the State Agency for Forestry and Environmental Protection; the State Agency for Local Self Government and Inter-ethnic Relations; and the Community Development and Investment Agency (ARIS).

consumption norms.

(b) Sulukta is located at the southwestern part of Batken Oblast, 150 km to the west of the oblast center of Batken. The town was developed from an industrial settlement around the coal mine; total town area is about 1,733 ha. The municipality also includes Kosh-Bulak Village (former Vostochnyi) located 7 km to the northwest of Sulukta Town, and Kenchi Village, the suburb of Sulukta, an area of future urban development. The town's landscape is complex. Elevation difference is about 200 m. The total population of the Municipality of Sulukta in 2014 was 21,700 (population growth from the previous year was 5%). The main water supply source for the town is a surface water source from the mountain river Tegermesai (later disappearing in the valley), located 36 km to the southwest of Sulukta. In the winter-spring period (December to May), this source gets significantly exhausted. To compensate for this, during the winter period the ground water source at the new Kara-Bulak village, consisting of three deep ground water wells with design capacity of 120-160 m³/h, are used. Gravity flow transmission mains from the Tegermesai source feed Sulukta Town and Makeevka Village. The well field also feeds this transmission. There are three reinforced concrete reservoirs and seven steel reservoirs. All reservoirs have their own service areas, as the town has a very complicated landscape, and therefore, complicated rationing schedule. The total length of water supply pipes is 90 km. Quality of service is very low, at an average of two hours per day. Some areas are not served by the network and the population there relies on trucked water. There is no metering and tariff collection is based on consumption norms.

(c) The feasibility and detail design study from the project's preparation will (a) carry out an analysis of the existing situation of the water supply systems in Kerben and Sulukta; (b) develop a concept and a feasibility study for rehabilitation and, if needed, expansion of the existing water supply systems to achieve coverage of 100% of the population in the two towns (this must be done by analyzing alternative options for the development of the water supply systems, among which the most financially, economically and technically sound option must be identified); (c) prepare preliminary designs and an outline for required activities with rough cost estimates to fully rehabilitate the water supply systems; and (d) prepare detailed engineering and design documents for prioritized activities not to exceed USD 4.0 million to be financed under the proposed project in each of the two towns. Since not all financing for the rehabilitation works may become available at once, the consultants shall identify the most critical priority activities to improve the water supply system in terms of quality of water supplied to the population (chemical, bacteriological composition, hours of operation) and to increase access to water supply for the population currently not served. Such activities may include rehabilitation of the water intake infrastructure (up to its original designed capacity) and critical segments of the distribution network and facilities, as well as improvement of commercial practices (metering, billing and collection; discontinuation of "goosehead" standpipes without valves; replacement of communal standpipes with household standpipes, etc.)

(d) Discussions were held with EBRD with regards to possible collaboration to improve water supply services in Kerben. To that end, the TOR for the feasibility and detail designs were structured such that they could inform and be used by other donor

agencies as well. As of the time of project preparation, EBRD is awaiting the findings of the feasibility study after which they will consider their participation in Kerben. This will ensure complementarity of planned activities for greater impact.

2. Improving solid waste collection service in participating towns:

(e) Currently, solid waste collection in the participating towns is sporadic and inefficient. As a result, many institutional and individual generators burn their waste creating environmental nuisance. Collection is performed directly by the towns using truck fleets comprised of various types of vehicles (hydraulic compaction trucks, container trucks, dump trucks, tractors with or without trailers). The truck fleets are outdated and inefficient, with significant downtime for repairs, and are often utilized for other municipal services as well.

(f) The project will seek to improve the collection capacity of the towns by procuring collection equipment that is simple to operate and maintain. Since curbside collection is often performed in the participating towns, and the population is used to it, the project will likely support similar systems that have lower depreciation and maintenance costs.

3. Improving street lighting:

(g) Activities are aimed at switching to more energy-efficient street lighting options and increasing lighting levels in participating towns. Switching from mercury to LED lighting will provide more than 40 percent in electricity savings, increase lighting levels, reduce the need for maintenance, and increase the lifetime of the bulb. Two activities, one in Baluckchy and one in Toktogul, have been identified and pre-feasibility studies are underway.

(h) Currently, participating towns often lack the resources to perform proper maintenance and replacement of defective bulbs due to highly constrained budgets. Preliminary estimates are included in the table below. These estimates are based on normative baseline assumptions (i.e., all light poles working) and are expected to generate around 2.13 gWh electricity savings over a lifetime of 15 years. It must be noted that in both cities normative baseline consumption is more than 3 times higher than actual consumption. Thus, total electricity consumption is likely to be higher after rehabilitation compared to the current situation; however, service quality will improve significantly and, at the same service level, the consumption increase would be much higher without using energy-efficient bulbs.

Sub-component A2: Safe and Energy Efficient Social Infrastructure Pilot (USD 3.8 million).

This sub-component will focus on improving the seismic safety and energy efficiency of social infrastructure. Activities will include retrofitting of school buildings to improve their energy performance, increase comfort levels and strengthen their seismic resistance. Since energy efficiency and seismic rehabilitation of social infrastructure have not yet been carried out in the Kyrgyz Republic, this sub-component is designed as a pilot aimed at demonstrating the benefits related to energy efficiency (e.g., energy savings, cost savings, and social co-benefits, such as improved indoor temperature and comfort, reduced occupant sick days, etc.), raising awareness about the importance of seismic safety, and paving the way towards more scalable programs, including through market capacity building activities.

Improving energy efficiency in the Kyrgyz Republic is critical given the recurrent winter energy

shortages the country faces, the precarious demand-supply situation, and the high energy inefficiency throughout the economy. In 2012, the country ranked among the top ten most energy inefficient developing economies worldwide. The public sector is considered to be a good starting point for demonstration purposes given its sizeable share in total energy consumption, its outreach capacity, and the important social co-benefits associated with energy efficiency improvements. There are about 5,500 public buildings throughout the country, most of which were built 25-60 years ago without any energy efficiency considerations. Due to insufficient budgets, the buildings have been poorly maintained and are often under-heated as a result of high heat losses and the dilapidated condition of the heating infrastructure. Energy audits carried out during project preparation as well as the results of the recently-completed urban heating and energy efficiency assessment confirmed the high energy savings potential in the public sector – estimated to amount to at least 30 percent – which can be achieved through implementation of basic, energy-efficient retrofits.

Demonstration buildings to be retrofitted under the project need to meet basic eligibility criteria, including (i) municipal ownership of the building; (ii) structural soundness of the building; and (iii) absence of plans for closure, downsizing, or privatization of the facility. In addition, the buildings were selected based on the following criteria: (iv) high social benefits and demonstration effect as reflected by the number of beneficiaries; (v) high energy savings potential using total energy consumption as a proxy; and (vi) priority for the town to ensure ownership, suitability for promotion activities, and operational sustainability.

In each of the selected buildings, detailed energy audits were conducted to identify the economically most viable and justified measures involving typical building-level energy measures, including building envelope improvements (insulation of walls and roofs, replacement of windows and exterior doors), heating system upgrades (renewal of heat piping, upgrade/replacement of boilers, installation of heat pumps), and indoor lighting (compact fluorescent lamps, light emitting diodes). Based on the preliminary cost estimates, it is expected that the project will finance energy efficiency upgrades in up to six schools²⁸ and kindergartens. The total energy saving potential over a 25-year lifetime compared to a normative baseline is estimated at 14.2 gWh. It should be noted that for the two schools and the kindergarten in Baluckchy the main benefits of the energy efficiency retrofits would be limited to improved comfort levels, safety, and functionality because the buildings are currently severely under-heated. As a result, most or all of the energy savings are used up by an increase in indoor temperature and may not lead to actual energy (cost) savings.

All identified buildings were reviewed for structural integrity and safety, and they appear to be able to sustain applied structural loads, including wind and snow loads. However, the territory of the Kyrgyz Republic is subject to high seismic hazards and all buildings in the country are likely to be exposed to earthquakes. The identified buildings, along with more than 80 percent of schools and kindergartens in the Kyrgyz Republic, are classified to have “low seismic safety.”²⁹ The proposed project will, therefore improve the seismic safety of the schools in addition to improving their energy efficiency. Specific measures will be identified during the feasibility stage undertaken shortly, likely involving the construction of new reinforced concrete skins at building exteriors and at selective interior walls of the buildings. This can be achieved in different ways; however, a common technique consists of constructing a new reinforced concrete skin at the building exterior.

²⁸ The following Schools and Kindergartens have been identified: School #5, School #8, and Kindergarten #8 in Baluckchy, and School #1, School Bokonbajeva, and Kindergarten #2 in Toktogul.

²⁹ UNICEF (2014), *Assessment of Safety of School and Pre-School Education Institutions in the Kyrgyz Republic: Summary Report*.

The new skin is attached to the existing wall through steel anchors, which are critical for ensuring that the new and existing wall act in unison in an earthquake. It should be noted that the new skin is to be constructed at selected locations within the building in the form of continuous vertical bands (from the foundation to the roof), as it is usually not required to strengthen the entire exterior wall area in a building. The seismic retrofit may involve other provisions, such as enhancing floor-to-wall and roof-to-wall connections.

Both seismic and energy efficiency retrofitting of social infrastructure is new for the Kyrgyz Republic. The proposed project will finance the first such improvements, which will be done on a small, pilot basis to ensure that lessons learned are captured and reflected in future scaled up activities. The pilot's implementation will be closely monitored to assure that lessons learned are well captured and results are disseminated among the main stakeholders.

Component B: Institutional Strengthening (USD 0.7 million). This component will support the Government's broad-based urban policy reform agenda at the national level with specific interventions at the local level aimed at strengthening service provision capacity in participating towns.

Today, urban planning is practiced mainly as traditional Soviet-era master planning, where national planning officers develop rigid master plans for towns that are unrelated to market demand and local conditions. These master plans are often centered on ambitious projects for industrial complexes and city greeneries but are rarely implemented due to both lack of financing and conducive market conditions. At the same time, urban areas grow unchecked in an unplanned and sprawled manner. This sprawled type of development has important consequences in terms of the costs of expanding services to the growing population and may lock Kyrgyz cities into a resource-intensive development path. Unmanaged sprawl is also taking place at hazardous locations exposed to mudslides and rush floods. Such new developments at the outskirts of towns are prevalent not only in all large cities like Bishkek, Osh, and Jalal-Abad, but smaller towns as well. At the *national level*, the project will support the Government broad-based urban policy with a focus on existing urban planning practices and the development of a roadmap to improve urban and spatial development in the Kyrgyz Republic. Institutional strengthening activities at the national level will be complemented by a separate grant funded through GFDRR, which will aim at strengthening disaster resilience through urban planning, and also by a grant funded by the Korean Green Growth Trust Fund, which will aim at providing technical assistance to move towards a greener urban development of cities in the country.

At the *local level*, participating towns and service providers often lack both the human skills and management tools to improve their financial performance and operational efficiency. As an example, many smaller towns in the country continue to rely on non-electronic billing and collection systems and manual/paper-based asset management systems. In the case of all urban services, realistic annual service performance targets are often missing. Many service provision practices are outdated, as participating towns and their utilities have not been exposed to contemporary practices, some of which have been successfully implemented in neighboring countries (e.g., water demand-side management measures in Tajikistan). At the local level, UDP activities will include: (i) development of Performance Improvement Plans for participating utilities; (ii) targeted technical assistance for the institutional strengthening of participating towns to improve the quality and efficiency of services provision, promote satisfactory operation and maintenance of existing assets and project activities (in water supply, solid waste, and energy efficiency of municipal infrastructure), and support participating towns to build municipal

dialogues to address local needs; (iii) the procurement and installation of financial management and planning tools (e.g., automated customer registers, billing and collection) to improve the managerial and revenue generation capacity of participating towns; and (iv) development of energy savings action plans in participating towns building upon the urban energy efficiency assessment undertaken with the Tool for Rapid Assessment of City Energy (TRACE) during project preparation. Performance Improvement Plans will outline a series of targets in the short and medium term to improve utilities' performance and will include specific actions needed to reduce water losses, improve quality of services, improve overall efficiency of operations and increase cost-recovery. Institutional support funds under this component could potentially be available to more towns than those receiving activities under Component A and Component B. Institutional strengthening activities at the local level will be complemented by a separate grant funded by ESMAP to strengthen the local capacity to plan and implement energy efficiency activities.

77. **Component C: Implementation Support (USD 0.9 million).** This component will support implementation of (i) contracting of local experts to assist the implementation unit and participating towns in the implementation of the project's activities; (ii) the maintenance of the Monitoring and Evaluation System (M&E), created under the BOUIP project, to continuously monitor and evaluate the performance and results of the project; (iii) the project-related operating costs of the implementing unit including consulting fees and in-country travel expenditures; (iv) project operating costs including contributions towards the cost of backstopping assistance by ARIS staff (the so-called administrative pool of ARIS); and (v) an annual audit of project accounts.

Annex 3: Implementation Arrangements

Kyrgyz Republic: Urban Development Project

Project Institutional and Implementation Arrangements

Specific instructions covering all aspects of project implementation management are to be found in an Operations Manual (OM), which will be prepared and adopted shortly.

Implementation period. The UDP will be implemented over a period of four years, commencing in September 2016, the planned date of effectiveness of the IDA Grant and IDA Credit. The Mid-Term Review (MTR) will be conducted no later than September 30, 2018. The implementation support plan is detailed further in Annex 4.

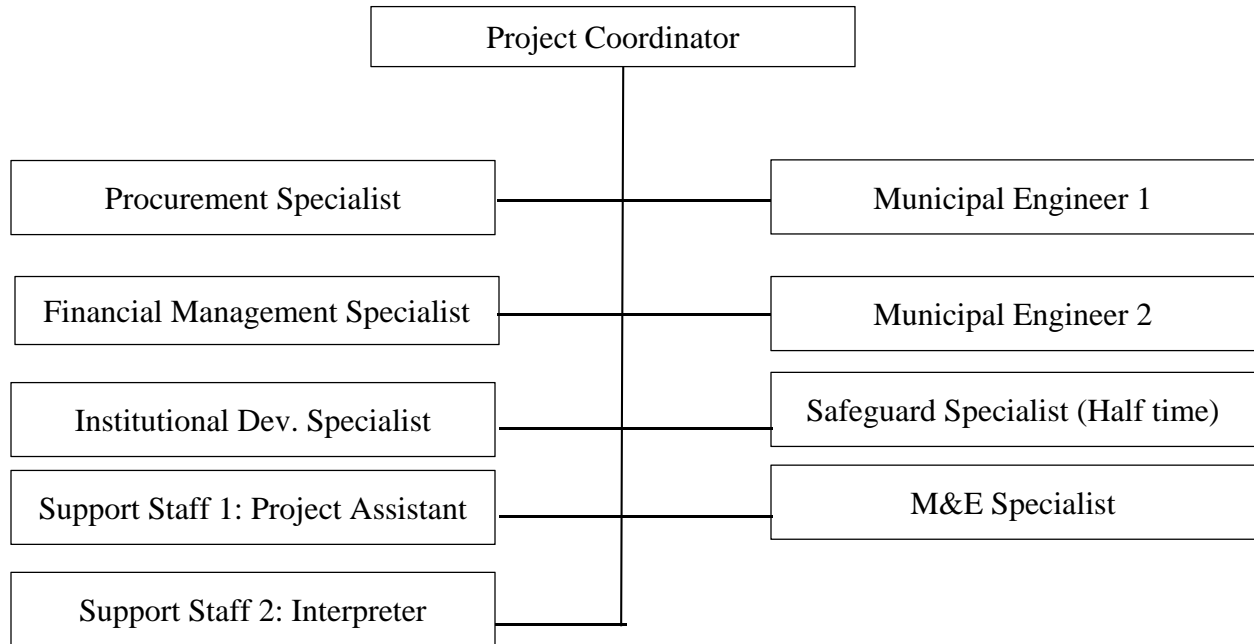
Institutions involved in project implementation. The key institutions involved in the implementation of the proposed project are the Community Development and Investment Agency (ARIS) and participating towns and utilities of participating towns. Policy guidance will be provided by the State Agency for Architecture, Construction and Communal Services (SAACCS). Project implementation will be carried out under the oversight of the Ministry of Finance (MoF). ARIS will be responsible for the overall implementation, including fiduciary and safeguards compliance, of the proposed project. Institutional arrangements and responsibilities of the different institutions are outlined below.

ARIS was created by Decree of the President of the Kyrgyz Republic in October 2003 as a legally and operationally autonomous institution for the purpose of managing the implementation of the IDA-supported First Village Investment Project (VIP I). It operates under the oversight of a Supervisory Board comprised of twenty-one representatives of the State administration, the local government sector, and the civil society,³⁰ and is headed by an Executive Director. It has been or is currently responsible for management of other Bank projects.³¹

For purposes of UDP, ARIS will maintain a core team comprised of six full-time staff, one half-time staff, and two support staff as follows: a project coordinator, an institutional development specialist, two municipal engineers, a procurement specialist, a financial management/disbursement specialist, a safeguards specialist (on half-time basis), a monitoring and evaluations staff, a project assistant, and an interpreter. The institutional specialist and the M&E specialist will be jointly responsible for public engagement and consultations. An organogram is presented below:

³⁰ The Supervisory Board is composed of the following members: seven representatives of state bodies of the Kyrgyz Republic, representing, respectively, the President of the Kyrgyz Republic; the Prime Minister; the Ministers of Economy and Finance; the Minister of Justice; the Minister of Education, Science and Youth Policy; the Minister of Health Care; and an Oblast Governor appointed by the President of the Kyrgyz Republic; seven representatives of local self-government bodies; and seven representatives of civil society. The responsibilities of the Supervisory Board are to guide and supervise the activities of ARIS; to appoint and, if warranted, dismiss the Executive Director; to approve the policies, modifications, and amendments to ARIS' Charter, the annual budget, and working plans and any modifications to them, annual reports, reports on special studies, and independent auditors' reports. The overall responsibility and supervision of ARIS are in the hands of the Supervisory Board, to which both the Executive Director and the Audit Unit report. The Board meets normally once to at most twice a year.

³¹ First, Second and Third Village Investment Projects (VIP I, II and III), Small Town Infrastructure and Capacity Building Project (STICBP), Bishkek and Osh Urban Infrastructure Project (BOUIP) and Additional Financing (BOUIP-AF), and the proposed Third Rural Water Supply and Sanitation Project.



The UDP’s project team will work under the management of ARIS’s Executive Director, and ARIS’ Administrative pool will provide backstopping support, as needed. Further to the core UDP staff, ARIS will engage, on a consulting basis, staff for the supervision of water supply and street lighting activities, as outlined in the section Construction Supervision below.

In its position as the implementing agency for the UDP, ARIS will be responsible for and carry out all project implementation in accordance with the OM, including procurement, financial management and accounting, social and environmental safeguards, and citizen communication as well as routine communications with the Association. Participating towns and their utilities will be closely associated with all decisions regarding procurement, contract execution, site supervision, and authorization of payments to contractors. Relations between ARIS and participating towns and assignment of project implementation responsibilities are governed by a Cooperation Agreement into which ARIS will enter with each participating town. A model of the Cooperation Agreement will be included in the Operational Manual. The format for the Cooperation Agreement must be approved by the Association.

Participating towns include the towns of Sulukta, Kerben, Baluckchy, Toktogul. The Mayor’s office, will take the lead on behalf of the participating town in participating in project implementation. In cases where the UDP supports the local water utility (vodocanal), that utility will be closely involved with all technical aspects on behalf of the participating town. The municipal departments responsible for, respectively, social infrastructure, public infrastructure such as street lighting, solid waste management, billing and collection, and urban planning will be engaged in review of all technical aspects under the UDP within their prerogatives. Specifically, they will review and comment on all technical specifications and terms of reference, join evaluation panels, review and comment on technical reports and deliverables, exercise supervision oversight, and participate at key points such as testing or commissioning of assets. The Mayor’s office will be responsible for obtaining any required approvals, including approvals from the Town Council. The Mayor’s office will also be responsible for holding annual public engagement meetings in order to ensure pro-active communication with the population and explain to

beneficiaries and the public at large the benefits from the project, report on implementation progress, and disseminate a robust grievance redress process spanning beyond safeguards-related issues. The Mayor's office will ensure a minimum participation of women in these community consultations. Specific responsibilities will be further defined in the OM.

SAACCS is the central government body assigned with the mandate to develop policies in the urban sector, including urban planning and spatial development, energy efficiency, water and sanitation, and other urban services. As such, SAACCS has been providing policy guidance during the UDP's preparation and will continue to guide project implementation. ARIS will share the annual work plan of UDP with SAACCS for information. ARIS will continue to consult SAACCS on all issues related to town selection, identification and prioritization of activities, technical specifications, and areas for capacity building and institutional strengthening. SAACCS, through its respective departments, will continue to join evaluation panels and comment on technical deliverables. SAACCS will provide overall coordination of stakeholders in the respective areas of urban services in relationship with the UDP. SAACCS is also the main beneficiary of policy support under Component B related to urban planning and spatial development.

MoF is the Recipient's representative for the purposes of the UDP's identification, preparation and implementation, and main counterpart for the project. As such, the MoF declares its commitments to the objectives of the project and will cause the project to be carried out in accordance with the financing agreement and other relevant documents. In addition, the MoF will be responsible for providing timely co-financing for the project in accordance with the Financing Agreement. As needed, the MoF will consult other government agencies and communicate the consolidated Government's position to the Association. During project implementation, it will review and approve the annual work plan and budget of the UDP.

Urban Policy Technical Working Group. A Technical Working Group (WG) has been established as part of the Building Urban Resilience activity (funded by the GFDRR) and will continue to serve as a platform for technical urban policy discussions. The WG is chaired by SAACCS Deputy Director and composed of representatives of the Urban Design Institute, the Department of Architecture, the Planning and Territorial Development, the Architects Offices of the Municipalities of Bishkek and other towns, the Mayor's Office of Bishkek, the Urban Initiatives NGO and the Agency for Local Self-Government and Ethic Affairs. Representatives from the Ministry of Economy and the Prime Minister's office have also been invited to join the WG. In addition, the WG will inform and seek validation from the recently launched high-level Governmental Commission to support the social and economic development of cities within the Kyrgyz Republic. This commission is led by the First Deputy Prime Minister with participation of several ministries, such as Ministry of Economy, MOF and SAACCS.

Selection of participating towns. During preparation, eligibility criteria were developed and included poverty levels; access to basic services including water, sanitation, and solid waste collection; and population and population growth of medium sized towns (towns with population above 10,000). Other donor current and planned engagements were taken into consideration with the objective to distribute the assistance more evenly. To meet government priorities, consultations were held with the MoF, SAACCS, the Regional Development, Transport, Construction and Communications Unit at the Prime Minister's Office (PM Office), the State Agency for Local Self Government and Inter-ethnic Relations, and the Ministry of Education. Following intergovernmental consultation, and in line with developed eligibility criteria, the Government has

identified the towns of Sulukta, Kerben, Baluckchy and Toktogul.³² Given the small size of financing within the UDP, the project does not envisage activities in more than four towns. Project identification and preparation activities in the identified towns have commenced prior to appraisal with funding from the ECADev Trust Fund allocated for the purpose of the UDP's preparation.

Project activities and components. The UDP will implement activities that improve access and quality of municipal services and infrastructure, and the energy efficiency of urban infrastructure in participating towns. This may include activities to improve access and quality of municipal services; improve the energy efficiency and seismic safety of existing urban infrastructure such as municipal social infrastructure buildings (e.g., schools), street lights, and municipal mechanical equipment; and to strengthen the capacity of participating towns and their utilities to plan and deliver local services.

At the time of appraisal, preparatory activities were underway. Based on the towns proposed by the MoF and the Prime Minister's office in March 2015, ARIS conducted a preliminary technical assessment of municipal services and local government capacity that covered the following: (i) solid waste management; (ii) water supply and sanitation; (iii) municipal roads and related infrastructure; (iv) municipal finance and management; and (v) city energy assessment and energy efficiency of social objects. This assessment identified needs and priorities for activities and technical assistance in each of the towns, as well as other donors' ongoing and planned involvement. Visits to the towns and in-depth discussions with local counterparts and service providers took place on priorities that could be supported under the UDP. Based on identified priorities, it was agreed³³ that the UDP will support the improvement of water supply in the towns of Sulukta and Kerben; the improvement of energy efficiency of social objects in Baluckchy and Toktogul; the improvement of collection of solid waste in most towns; technical assistance for participating towns and service providers aimed at improving their performance; and technical assistance for SAACCS in the areas of urban planning and spatial development.

Implementation of Component A (Urban Development). ARIS will be in charge of the preparation of detailed design and engineering studies, as well as tender documents, procurement, technical supervision of contract implementation and financial management, and accounting of contract execution. Participating towns will be co-signatories to all work and/or supply contracts and their representatives will be closely associated with all decisions regarding procurement, contract execution, site supervision, testing and commissioning, and authorization of payments to contractors.

Implementation of Component B (Institutional Strengthening). This component will finance various activities aimed at assisting participating towns in enhancing their capacity to deliver urban services, and SAACCS in formulating and developing urban planning policies. ARIS will be responsible for component implementation, including procurement; selection; management and payment of consulting, non-consulting services, and other vendor services required; and procurement of software packages as needed. Each year ARIS will assess the training needed for participating towns and other project beneficiaries, and prepare a training and capacity building plan to be discussed and agreed with the Association on an annual basis.

For both Components A and B, the Communal Services and Utilities Directorate at SAACCS will

³² The selected towns were communicated to the Bank via official correspondence from the PM Office and the MoF in March 2015.

³³ Priorities and specific activities in each town to be supported under the UDP were confirmed during the project preparation mission in June 2015, and agreed by the Government (MoF, SAACCS, and participating towns).

be consulted and asked to comment on terms of reference, draft reports, and other deliverables related to urban planning and energy efficiency activities, whereas the Water Directorate at SAACCS will be consulted and asked to comment on activities related to the water supply sector, join evaluation panels, and comment on technical deliverables within this component.

Implementation of Component C (Implementation Support). This component will be implemented by ARIS. All local experts associated with project implementation will be included in the Procurement Plan under the consulting category. Backstopping provided by ARIS staff outside of the ARIS UDP team (i.e., the Administrative pool) will be financed under the category of operating expenses.

Technical supervision. Construction supervision for Bank-financed projects implemented by ARIS is usually done by individual consultants hired by ARIS. While most works seems to have been delivered with satisfactory quality, there have been multiple cases of quality control deficiencies under BOUIP and other projects. A detailed evaluation of existing construction supervision practices done as part of the UDP's preparation revealed this is due to the following: (i) there is no well-defined system for construction supervision that spells out clearly the functions and responsibilities of supervisory staff, contractors and employers; (ii) there is a lack of quality control mechanisms in place, and record keeping and recording are especially poor; (iii) weekly or so regular planning with the participation of the supervision engineer is not done but is left to the contractors; and (iv) individual ARIS supervisors are more easily exposed to demands by the contractors. Despite multiple guides and other literature available on the subject of construction supervision, no manual of any sort is currently being used within ARIS.

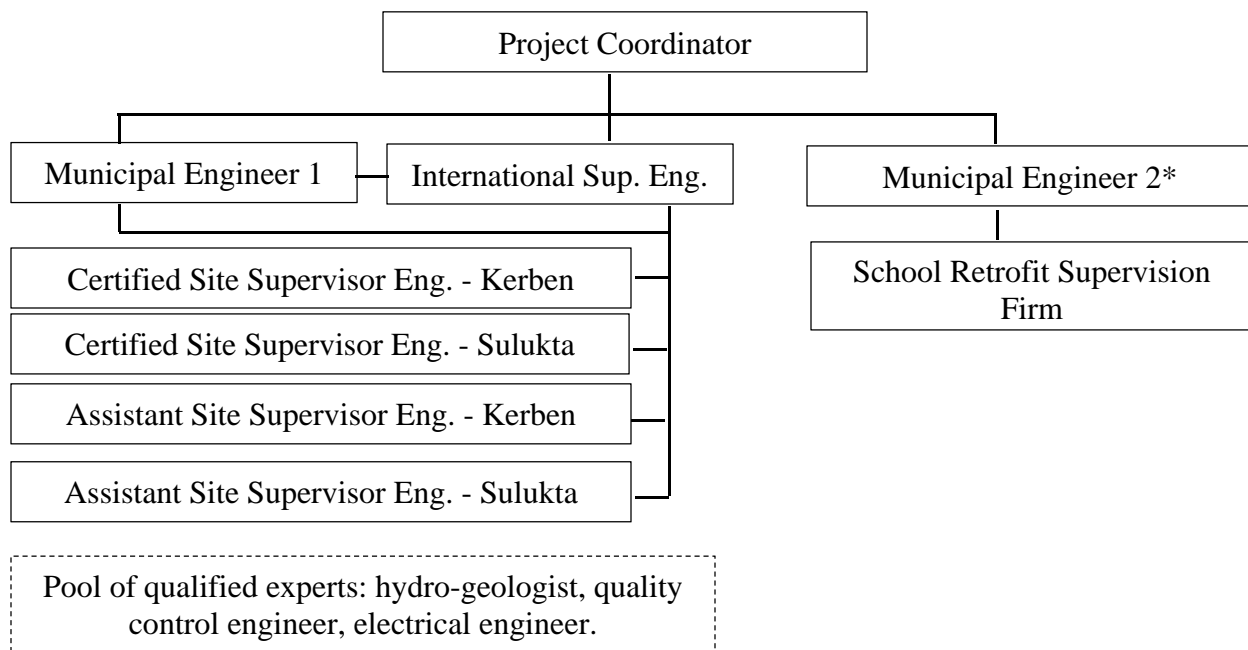
In view of these shortcomings, the VIP2 contracted, prior to closure, a local engineering company for a small value contract on an experimental basis. The experience has been mixed and required a very intense capacity building effort directly by the Association to meet required standards. In general, the capacity of local engineering consulting companies in the Kyrgyz Republic is low and they are not accustomed to perform construction supervision. Typically, Kyrgyz regulations require design (i.e., author) supervision, but this supervision is not coupled with construction supervision by site engineers. Therefore the notion of construction supervision exercised under Bank projects is a new concept for the local consulting industry. During the UDP's preparation, the Association organized a capacity building workshop for the local construction, design, and supervision industry and confirmed that existing capacity, especially in terms of construction supervision, remains low.

In principle, using individual consultants as construction supervisors is not a recommended or adopted practice anywhere. The Bank has therefore decided to gradually transition towards using engineering consulting companies for construction supervision in the Kyrgyz Republic, an effort that could provide liability insurance and put more comprehensive systems in place. Although ARIS has been supervising Bank-financed project activities, this is viewed as a stopgap measure as ARIS is not an engineering company and not well-suited to perform such functions over the long term. Given the low capacity of the local consulting industry, it is agreed that this transition will be done gradually and on a case-by-case basis. In parallel, concerted efforts will be made to build the capacity of the local industry.

After the detailed review of possible construction supervision arrangements for UDP, and in order to enhance quality control, the following arrangements will be followed: (i) construction supervision for the rehabilitation of schools will be done by an engineering company with foreign

input due to the novelty of both seismic retrofitting and combined seismic and energy efficiency retrofitting. Given the high risk of these activities and the fact that a lot of field adjustments will be needed under the guidance of the construction engineer, it is necessary to ensure high quality technical expertise; (ii) street lighting activities are simple in nature and could be supervised directly by one of the project’s Municipal Engineers; (iii) rehabilitation of water supply systems is an area where ARIS has built experience and could supervise directly. However, a much more profound system of supervision must be established, including an internationally-recruited supervision engineer on a part time basis, certified site engineers represented full-time at site, and a pool of qualified experts (i.e. hydro-geologist, quality control engineer, electrical engineer) engaged for a short period of time on an ‘as-needed’ basis per pre-approved construction plans.

The duration of construction for the school rehabilitation as well as for the water supply activities is expected to be no more than 18 months and will be done in parallel at the two locations in Kerben and Sulukta (for water) and Baluckchy and Toktogul (for schools). The construction period for the streetlights is expected to be no more than six months and will be done in parallel in the two locations – Baluckchy and Toktogul. Therefore, the duration of the supervisory staff hired by ARIS for water supply activities shall not exceed 18 months. An organogram describing construction supervision is presented below.



*Municipal Engineer 2 will also directly supervise street lighting rehabilitation

Financial Management

Implementing Entity. The Community Development and Investment Agency (ARIS) will be responsible for implementing the financial management (FM) function of the Project, including the flow of funds, budgeting, accounting, reporting, internal controls, and external audit. A FM assessment was carried out to determine the FM implementation risk and the FM arrangements at the implementing agency, including accounting, reporting, planning, budgeting, internal controls, and staffing. FM arrangements were assessed to be satisfactory to the Bank. The inherent risk of

the project after applying risk mitigation measures is rated as *Moderate*; the Control Risk and the overall residual FM Risk are also considered to be *Moderate*.

Strengths and Weaknesses. Significant strengths provide a basis for reliance on the project financial management system including the following: (i) significant experience of ARIS FM staff in implementing Bank-financed projects over the past several years; (ii) adequate accounting software utilized by ARIS; (iii) FM arrangements under active projects are satisfactory; and (iv) unmodified audit reports issued on ongoing projects’ financial statements confirm this fact. No significant weaknesses were identified at ARIS. The following capacity building actions have been agreed to be implemented:

Actions	Responsible	Completion date
Update the FM Chapter of the draft project Operational Manual (OM) ³⁴ to reflect UDP-related internal control, budgeting, external auditing, financial reporting, and accounting policies and procedures	ARIS	Agreed by effectiveness
Modify the existing accounting software for its accounting and financial reporting purposes acceptable to the Association, with capacity to, <i>inter alia</i> , generate IFRs, statement of expenditures, withdrawal applications and annual financial statements, in a manner acceptable to the Association.	ARIS	30 days after effectiveness

Budgeting and planning. ARIS has acceptable budgeting and planning capacity under the UDP. The annual budget of the UDP will be based on the final Procurement Plan that is to be discussed and agreed with the ARIS Executive Director and cleared by the World Bank. All changes to the Procurement Plan will be reviewed by the Executive Director and cleared by the World Bank. The project coordinator, the FM specialist, technical specialists of the project, and the procurement specialist will be involved in preparation of the annual budget for their respective components. The budget will be cleared by the MoF and the Bank and approved by the Executive Director of ARIS. The budget will form a basis for allocating funds to project activities and for requesting counterpart funds from the Government where appropriate. Such a budget is not suitable for the planned figures of IFR. Therefore, it was agreed that ARIS will prepare a Disbursement Plan based on the approved Procurement Plan. The Disbursement Plan will be prepared according to the IFR format (disbursement categories, components and activities, account codes, and broken down by quarter) and will be used for calculation of IFR planned figures.

Accounting and Reporting. Cash basis accounting will be applied for the projects’ accounting. ARIS will maintain its current accounting system. Project management-oriented Interim unaudited Financial Reports (IFRs) will be prepared under the UDP. ARIS will produce and submit to the Association a full set of IFRs every calendar quarter throughout the life of the UDP. The format of IFRs will be agreed before negotiations and will include (i) Project Sources and Uses of Funds; (ii) Uses of Funds by Project Activities; (iii) DA Statement; (iv) Project Balance Sheet; and (v) a Statement of Expenditure Withdrawal Schedule. IFRs will be produced by the accounting

³⁴ At time of appraisal, ARIS has prepared a draft OM.

software. These financial reports will be submitted to the Association within 45 days of the end of each calendar quarter. The annual audited project’s financial statements and audit report together with the management letter will be provided to the Association within six months of the end of each fiscal year and also at the closing of the UDP.

Internal Controls. ARIS’ internal control system was assessed to be capable of providing timely information and reporting on the UDP. The FM chapter of the draft OM is well-prepared and provides for full document accounting and financial reporting policies and procedures such as internal control procedures, including authorization of expenditures and approval of the payments; bank reconciliations; verification of expenditures eligibility by the Financial Manager; description of financial documents flow/circulation; indication of eligible cash transactions, budgeting procedures, formal reconciliation procedures of project records with Client Connection and XDR/USD reconciliation; and safeguards for assets. Expenditures incurred by ARIS will be authorized by the director and verified for the eligibility and accuracy by the financial manager. The final Operational Manual will be reflect the specific activities of the UDP, including Chart of Accounts, Audit TOR, frequency of submission, and format of IFRs.

Staffing. ARIS has experienced FM staff, consisting of the Financial Manager responsible for overall FM arrangements of all projects implemented by the agency. The Financial Manager has extensive experience working on the Bank-financed projects. The Financial Manager will be in charge of the overall FM arrangements of the UDP as well. There are also four experienced disbursement specialists at ARIS and one assistant to the Financial Manager. Such arrangements are considered adequate; no further actions are required of ARIS.

External Audit. External audit of the UDP will be conducted (i) by independent private auditors acceptable to the Association, pursuant to TORs acceptable to the Association, and selected by ARIS, and (ii) according to the ISA issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. The TOR will include (i) audits of financial statements; (ii) assessments of the accounting system; and (iii) a review of the internal control mechanisms. The following table identifies the required audit reports that will be submitted by the PIU together with the due date for submission.

The audited financial statements will be disclosed to the public in a manner acceptable to the World Bank. Following the Association’s formal receipt of these statements from the borrower, the Association makes them available to the public in accordance with the World Bank Policy on Access to Information.

Audit Report	Due date
UDP Financial Statements include Project Sources and Uses of Funds, Uses of Funds by Project Activities, Project Balance Sheet, SOE Withdrawal Schedule, DA Statement, Notes to the Financial Statements, and Reconciliation Statement.	Within 6 months of the end of each fiscal year and also at the closing of the UDP.

Disbursements

Disbursements from the IDA Grant and Credit Accounts will follow the transaction-based method, i.e., traditional Bank procedures including advances to designated accounts, direct payments, and Special Commitments and reimbursement (with full documentation and against

Statements of Expenditures - SOEs). The separate (Grant and Credit) designated accounts will be opened in a commercial bank acceptable to the Association. For payments above the minimum application size, as will be specified in the Disbursement Letter, ARIS may submit withdrawal applications to the Association for payments to suppliers and consultants directly from the Credit/Grant Accounts. Disbursement arrangements will be detailed in the Disbursement Letter.

The project will have three disbursement categories as follows:

Category	Amount of the Credit Allocated expressed in USD (SDR)	Amount of the Grant Allocated expressed in USD (SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, consultant's services, non-consulting services and training under Components A1 and B	6,000,000 (4,460,000)	3,700,000 (2,760,000)	100%
(2) Goods, works, consultant's services, non-consulting services and training under Component A2	600,000 (440,000)	800,000 (580,000)	37%
(3) Goods, consulting services and incremental operating costs under Component C	0	900,000 (660,000)	100%

The Government contribution of USD 2.40 million will finance the remaining 63% under component A2.

Procurement. Overall, the public procurement environment in the country is improving as the Public Procurement Department (PPD) under the Ministry of Finance has revised the Public Procurement Law (PPL) and the new PPL has been recently adopted by the Parliament and signed by the President. The new PPL will create an independent complaint review commission and PPD will become a regulatory body for public procurement. The Association is supporting the institutional development of PPD and the complaint review commission, as well as capacity building of all stakeholders. The Government is developing e-GP with the Association TA and ADB financing.

Applicable Procurement Guidelines. Procurement for the proposed Project will be carried out in accordance with both "Guidelines: Procurement of Goods, Works and Non-consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers," dated January 2011 (revised July 2014) and "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers," dated January 2011 (revised July 2014). The World Bank "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credit and Grants" dated October 15, 2006 and revised on

January 2011, will also apply. For each contract to be financed by the Association, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between ARIS and the Association task team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect actual project implementation needs and improvements in institutional capacity.

Procurement Risk Assessment. The Bank staff conducted a procurement capacity and risks assessment using the Procurement Risk Assessment and Management System (PRAMS). Procurement activities will be carried out by ARIS, which has been effectively managing procurement activities under BOUIP, VIP3, and the Second Rural Water Supply Project. ARIS will have overall responsibility for procurement under the project. ARIS has a main office in Bishkek and seven oblast offices. The main office of ARIS is staffed by four well-qualified and experienced procurement specialists, of which one will be dedicated to the UDP team.

The Procurement Capacity Assessment Report, including the risks and risk mitigation plan, has been filed in the World Bank's PRAMS. The key issues and risks include: (i) potential risk of delays in the implementation of the project due to the complexity of procurement processes and decision-making that involves local governments and (ii) insufficient contract monitoring and contract management skills. Given the findings of the assessments, the initial overall procurement risk under the project is assessed as "substantial." Mitigation measures include:

- Ensure the publication of procurement notices and contract award information as required by the Bank Procurement and Consultant Guidelines, including publication on the E-GP website
- Prepare project Operational Manual that will include a procurement section detailing procurement arrangements and an independent complaint-handling mechanism, including for contract management.
- Enhance contract management through hiring of qualified consulting firms for the supervision of school modernization.
- To bring to the Association's notice each and every procurement complaint received from any supplier or consultant relating to the procurement and contract management process, and to record and address of these complaints promptly and diligently.
- To maintain up-to-date procurement records and to make these available to the Association's staff, auditors, etc., as required.

Procurement of Works. Works procured under this project would include rehabilitation of the water supply system in Kerben and Sulukta and modernization of schools and improvement of street lighting in Toktogul and Baluckchy.

Procurement of Goods. Goods procured under this project would include billing systems for participating towns and their utilities and special machinery, such as solid waste collection equipment.

Goods contracts equal and above USD 1,000,000 equivalent will be procured under ICB procedures using the Bank's SBD for procurement of goods. The NCB method will be applicable for procurement of goods contracts with estimated budget of less than USD 1,000,000. The ECA Sample NCB bidding documents shall be used taking into account the NCB conditions set forth in the Financing Agreements. Goods contracts with an estimated budget less than USD 100,000 equivalent may be procured using Shopping procedures on the basis of at least three written price quotations obtained from qualified suppliers.

For works and goods, NCB conditions indicated in the Financing Agreement will apply.

Selection of Consultants. Consulting services will include development of detailed designs for street lighting in Toktogul and Baluckchy; various engineering services related to technical supervision of the civil works and project audit; and various contracts under Component B to strengthen the institutional capacity of project beneficiaries.

The methods for selection of consultants will include Quality and Cost Based Selections (QCBS), Quality Based Selections (QBS), Fixed Budget Selection (FBS), Least Cost Selection (LCS), Selection based on Consultants Qualifications (up to USD 300,000), Single Source Selection in compliance with Paragraph 3.8 of the Bank's Consultant Guidelines, and Individual Consultants (IC). Contracts estimated to cost above USD 300,000 equivalent will be advertised through United Nations Development Business (UNDB), the Bank's website, and local media (one newspaper of national circulation or the official gazette, and IA's website). Short-lists of consultants for services estimated to cost less than USD 100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. The Bank's Standard Request for Proposal Document would be used as a basis for all procurement of consultancy services to be procured under the Project. Some ARIS staff hired under previous projects would continue working for implementation of the project.

Training. Training includes expenditures (other than those included in the consulting category) in connection with study tours, training courses, seminars, workshops and other training activities, including cost of training materials, space and equipment rental, travel, per diem costs of trainees and trainers, and trainers' fees (as applicable) based on an annual budget found satisfactory by IDA.

Operating Costs. The credit/grant will finance incremental expenses incurred by ARIS on account of the project implementation, management and monitoring, including operation and maintenance of vehicles, office equipment operation and supplies, communication costs, support for information systems, translation costs, bank charges, travel and per diem costs, salaries of contractual staff (excluding consultants' services and salaries of officials of the Recipient's civil service), social charge, office administration costs, and other reasonable expenditures directly associated with the carrying out of the project as agreed by the Association; all based on an annual budget acceptable to the Association.

Assessment of the agencies' capacity to implement procurement. Responsibility for actual implementation of the project will rest with ARIS, which was designated as the Project Implementation Agency. Participating towns will retain authority to sign contracts and their representative will be closely associated with all decisions regarding contract execution, site supervision, and authorization of payments to contractors.

Procurement Thresholds and Methods of Procurement. It has been agreed that if a particular invitation for a bid is comprised of several packages, lots or slices, and invited in the same invitation for bid, then the aggregate value of the whole package determines the applicable threshold amount for procurement and also for the review by the Association. The national competitive bidding (NCB) conditions will be part of the Financing Agreement. The following methods of procurement shall be used for procurement under the project.

Expenditure Category	Contract Value (USD)	Procurement Method	Bank Prior Review
Civil Works	>= 5,000,000	ICB	All ICB contracts
	< 5,000,000	NCB	First contract
	<50,000	Shopping	First contract
	NA	DC	All
Goods	>= 1,000,000	ICB	All ICB contracts
	<1,000,000	NCB	First contract
	<100,000	Shopping	First contract
	NA	DC	All DC contracts
Consultant Services	NA	QCBS, QBS, FBS, LCS and CQS*	All contracts >= USD 300,000 for firms; all contracts >= USD 200,000 for individuals; and all SSS contracts above 5,000.
	NA	SSS	
	NA	IC	
Notes: ICB – International Competitive Bidding NCB – National Competitive Bidding DC – Direct Contracting QCBS – Quality and Cost Based Selection QBS – Quality Based Selection FBS – Fixed Budget Selection LCS – Least Cost Selection *CQS – Selection Based on Consultants’ Qualification below \$300,000 depending on the nature of assignment SSS – Single (or Sole) Source Selection IC – Individual Consultant selection procedure NA – Not Applicable			

The prior review thresholds will be periodically reviewed and revised as needed during the Project implementation period based on implementation of risk mitigation measures, reports from procurement post-reviews, and improved capacity of the implementing agency.

Procurement plan. For each contract to be financed by the Association, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between ARIS and the Bank project team in the Procurement Plan. A Procurement Plan has been developed covering the above procurement activities and will be agreed during negotiations. Thereafter, the plan will be updated periodically, at least once per year, and each update will be subject to the Association’s prior review. The initial

Procurement Plan plus the subsequent updates will be published on the Bank's external web site in line with the requirements of Bank Guidelines.

DRAFT PROCUREMENT PLAN URBAN DEVELOPMENT PROJECT						
Component	Item №	Contract Description	Procu. Method	WB Review (Prior/Post)	Date of Contract Signing	
GOODS						
B	1	Purchase of goods and billing systems for municipalities	NCB	Prior	9/28/2017	
A1	2	Purchase of special machinery (solid waste)	NCB	Post	10/12/2016	
WORKS						
A1	1	Rehabilitation of water supply system in Sulyukta	NCB	Prior	11/26/2016	
A1	2	Rehabilitation of water supply system in Kerben	NCB	Post	10/22/2016	
A1	3	Improvement of street lightning in Toktogul	NCB	Prior	9/8/2017	
A1	4	Improvement of street lightning in Balykchy	NCB	Post	9/8/2017	
A2	5	Modernization of schools	NCB	Prior	11/26/2017	
Component	Item №	Contract Description	Firm or Ind.	Select. Method	WB Review (Prior/Post)	Date of Contract Signing
CONSULTING SERVICES						
		Contract supervision for Kerben and Sulyukta:				
C	1	Hydrogeologist; quality control; mechanical/electrical (all on needs basis)	Ind	IC	Post	1/6/2017
C	4	Social mobilizers (2 positions over 18 months)	Ind	IC	Post	2/6/2017
C	5	Assistant resident engineers (2 positions over 12 months)	Ind	IC	Post	5/3/2017
C	6	Resident engineers (2 positions, Bishkek recruited over 18 months)	Ind	IC	Post	2/5/2017
C	7	International contract supervision	Ind	IC	Prior Review	3/26/2017
C	8	Contract supervision for lightning/Electrical engineer	Ind	IC	Post	2/6/2018
A2	9	Contract supervision for schools	Firm	CQ	Post	3/22/2018
A1	10	Development of DD for street lightning in Toktogul and Balykchy	Ind	IC	Prior Review	9/21/2016

B	11	Technical assistance (multiple	Ind/Fir		Post	
C	12	ARIS Staff	Ind	IC	Post	7/18/2016
C	21	Audit	Firm	LCS	Prior Review	

Monitoring & Evaluation. ARIS will also be in charge of continuous monitoring and evaluation (M&E) of project implementation. Accordingly, M&E activities will focus on (i) ensuring that project activities are implemented in accordance with procedures outlined in the OM; (ii) providing information on project performance in terms of project benefits and institutional capacity development; (iii) alerting the Kyrgyz authorities and the Bank to actual and/or potential problems in implementation so that adjustments can be made in a timely fashion; and (iv) providing a mechanism for ARIS to continuously self-evaluate its performance and explore possible improvements. ARIS will prepare semi-annual progress reports and submit them to the Association, with copies to SAACCS and the MoF. Semi-annual results will be consolidated in an Annual Report.

Annex 4: Implementation Support Plan

Kyrgyz Republic: Urban Development Project

Strategy and Approach for Implementation Support

1. The Implementation Support Plan (ISP) describes how the Association will assist the client in achieving the PDO of the project. In particular, the ISP puts emphasis on accomplishing the following objectives: (i) provide necessary technical advice to the client and bring international experiences and good practices to ensure that the project meets the Association's technical standards; (ii) ensure that the Implementing agency's measures meet the standards approved by the Association in terms of construction supervision; (iii) ensure that the required fiduciary, social, and environmental safeguards are put in place and implemented per the Financing Agreement and other project documents; and (iv) ensure that the annual training plans and programs benefit exclusively the main project beneficiaries, i.e., the participating towns.

Implementation Support Plan

2. **Technical Implementation Support.** During the implementation phase, the task team will continue to engage experienced infrastructure engineers to ensure the technical quality of outputs. Specifically, a water and sanitation engineer, a structural/seismic engineer, and an electrical engineer with background in energy efficiency retrofits will be engaged to review all designs prior to tender. Given that earlier Bank-financed projects in the Kyrgyz Republic have experienced issues with sub-optimal designs, and the generally low capacity of the local consulting industry, reviewing designs is required to mitigate existing risks. During the construction phase, the municipal infrastructure engineer on the team will provide supervision support to ensure the quality of works and safety as well as to advance discussions on the O&M strategies by the recipient participating towns/utilities. Given the shortcomings in construction supervision observed in other projects implemented by ARIS, particular attention will be placed to ensure that supervision systems are in place and are being followed closely. Among others, weekly planning documentation and daily supervision records will be reviewed regularly. Technical implementation missions will be implemented three times a year during the first 18 months of project implementation, followed by bi-annual supervision missions. The team of engineers will carry out site visits where works are ongoing or where service has recently commenced.

3. **Procurement Supervision and Ex-post Review.** Routine procurement reviews and supervision will be provided by the procurement analyst based in the country office. In addition, two supervision missions are expected to take place per year during which ex-post reviews will be conducted for the contracts that are not subject to Bank prior review on a sample basis (20 percent in terms of number of contracts). One ex-post review report will be prepared per fiscal year, including findings of physical inspections for not less than 10 percent of the contracts awarded during the review period.

4. **Financial Management Implementation Support.** During project implementation, the project team will supervise the project's financial management arrangements in the following ways: (i) review the project's quarterly IFRs as well as the project's annual financial statements, the auditor's management letters, and remedial actions recommended in the auditor's management letters, and (ii) during the Bank Team's on-site missions, review the following key areas: project accounting and internal control systems; budgeting and financial planning arrangements;

disbursement arrangements and financial flows, including counterpart funds, as applicable; and any incidences of corrupt practices involving project resources. As required, a World Bank-accredited financial management specialist will participate in the implementation support and supervision process.

5. **Environmental and Social Safeguards Implementation Support.** A Bank Environmental Specialist will review the implementation of the project’s EMPs and provide guidance to the Implementing Agency’s environmental specialist to ensure compliance with the Bank’s environmental safety guidelines. Similarly, a bank Social Specialist will review the implementation of the project’s RAPs (if any) and provide guidance to ARIS to ensure compliance with the Bank’s social safeguards guidelines.

6. **Social Mobilization.** The Social Specialist will also review citizen engagement under the project, including the commitment to gender representation, and provide support regarding the implementation of the grievance mechanism in place. Assistance will also be provided towards adopting demand-side management to improve commercial practices of utility operators.

Table 1: Main focus in terms of support to implementation:

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	<ul style="list-style-type: none"> - Design of activities Procurement of works identified and designed during project preparation - Establish robust construction supervision systems (Kerben and Sulukta) - Identify institutional strengthening activities (billing and collection, etc) - Work with SAACCS to develop urban planning roadmap 	Entire team with particular focus on engineering and urban planning inputs	USD 100,000 annually	<ul style="list-style-type: none"> - Coordinate with EBRD regarding possible collaboration in Kerben - KGGTF funds for activities to support SAACCS as the agency to lead the policy agenda on green urban development in the country
12-48 months	<ul style="list-style-type: none"> - Construction phase for all activities continues - Institution strengthening to participating towns and SAACCS continues - Social mobilization to establish demand- 	Entire team with particular focus on engineering, commercial operations of service providers, citizen engagement	USD 100,000 annually	

	side management in water supply			
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Table 2: Skills mix required for the duration of project implementation

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team leaders	30	10	
Municipal engineer (structural/electrical/sanitary)	20	10	Mixed: field and non-field based staff
Urban planner	6	6	Field-based staff
Environmental specialist	4	6	Field-based staff
Social specialist	8	8	Field-based staff
M&E specialist	2	2	At MTR and project end
FM specialist	4	4	Field-based staff
Procurement specialist	8	8	Field-based staff

Annex 5: Economic Analysis

Kyrgyz Republic: Urban Development Project

The economic benefits from the project will be mirrored in improved quality of municipal service provision, including water supply, solid waste collection, street lighting, and social infrastructure. Improving these services will enhance welfare by reducing coping costs (e.g., time savings from water collection, reduced need for in-house drinking water treatment.) Activities in improving the quality of water supply are also expected to have welfare effects through improved health. Activities in improving energy efficiency and seismic resilience of social infrastructure are expected to improve the level of comfort of children and teachers and yield savings to participating towns which could be reallocated for other purposes in addition to reducing potential physical and human losses in an earthquake event. Improved street lighting is expected to yield benefits in the form of improved road safety and increased hours of operation of local business.

The project is expected to deliver substantial benefits by improving water supply services for approximately 40,000 residents in participating towns, 5,000 students through social infrastructure retrofit, and 15,000 residents through improved street lighting. Currently households in the cities of Sulukta and Kerben are receiving water supply – on average – for 2-3 hours per day, with large seasonal variations both in water quality and quantity. As a result they have important coping costs.

Results from the baseline survey revealed that in both towns, few households have piped water connections and most rely on either private or community standpipes as their main source of water. Some differences were found in terms of access to municipal services between poor and non-poor. A higher percentage of poor households rely on community standpipes or open water sources (vs. private standpipes) compared to non-poor households. Higher distances to main water sources and time used to collect water were also found among the poor. More than 70 percent of households – poor and non-poor – boil their water prior to consuming it. The rehabilitation of the water supply networks is expected to lead to an increase in quality of services by increasing the amount of hours of supply and reducing seasonal variations.

Large differences in quality of solid waste collection services is observed in Kerben and Sulukta. While in Sulukta solid waste is collected on average 1.3 times per month, in Kerben it is collected 3.3 times per month. This is reflected in much lower levels of satisfaction with solid waste collection services, with only 16 percent of households in Sulukta reported being satisfied against 80 percent in Kerben. No significant differences were found in solid waste collection services between poor and non-poor.

The project's economic analysis relies on activities identified during project preparation to assess benefit and costs streams. It includes (a) the cost of all project components, including estimated O&M costs and project implementation costs, and (b) all measurable benefits, including decreases in the time spent collecting water; welfare gains at household level associated with reduced expenditure on water storage tanks as well as reduced need for in-house treatment (i.e., boiling of water); and energy savings linked to social infrastructure retrofits. Expected benefits are based on results observed from similar projects in the country, namely the STICBP and the Rural Water Supply and Sanitation Projects (RWSSP1 & 2). Benefits in the form of increased DALY³⁵ resulting from improved seismic resilience of social infrastructure have been taken into account, but building reconstruction costs have not been considered. Reduced incidence of water-related

³⁵ Disability Adjusted Life Years

diseases such as infectious hepatitis and acute enteric infections as a result of improved access to quality water and decline in the reliance on standing water sources were not taken into account, as they are usually difficult to measure. Health benefits linked to increased comfort levels in retrofitted social infrastructure were not taken into account as well. Given the difficulty in estimating economic benefits, benefits linked to improved solid waste collection, improved street lighting, and activities developed under Component B (Institutional Strengthening) are also not taken into account. As with all economic analyses, the costs are perfectly observed while the benefits are not.

The economic analysis assumes 25 years of asset life in the case of water supply systems and social infrastructure and 15 years of asset life for street lighting activities, including four years of project implementation, with corresponding benefits to be realized starting in 2021. The adopted social discount rate is 5 percent³⁶ and the standard conversion factor for the cost is assessed at 0.85. All assumptions and key results are outlined below.

Given the conservative assumptions used, and the fact that no benefits could be accounted for Component B, the project's NPV and ERR are expected to be even higher than those estimated.

The detailed list of benefits and main assumptions can be found below:

- **Reduced time in collecting water:** Based on results obtained from similar operations in the country (STIBCP, RWSSP1 & 2), we are assuming a reduction of around 13.5 minutes per household per day in time collecting water. A rural average hourly wage of USD 0.66³⁷ is used as a conservative measurement of the opportunity cost of this time savings. Under these assumptions, the project is generating annual benefits of USD 440,840 from economic gains of saving time to collect water.
- **Reduced coping costs:** It is common practice in the country for households to boil water prior to consuming it. Also, a large percentage of households invest in water tanks or recipients to ensure security of supply. Based on results obtained from similar operations, the analysis assumes that approximately 20 percent of households will forego investments in water tanks following the project due to improved (continuity) water services. Water storage tanks cost USD 250 in the country and a depreciation of around five percent a year is assumed to calculate the future annual savings implied by not purchasing new tanks. Energy savings associated with reduced need to boil water due to improved water quality are estimated based on a 10 liters/day per capita benchmark. We estimate a reduction in practices by 50 percent (bringing boiling practices to similar levels as observed in other projects). Well-established benchmarks for the region are used in terms of energy requirements to boil water (0.09 kWh per liter of water) and an economic cost of USD 0.27 per kWh.³⁸ Under these assumptions, the project is expected to generate annual benefits of USD 1,767,367 from energy savings linked to boiling water and USD 20,333 due to reduced investments in water storage tanks.
- **Energy Efficiency savings:** Activities in schools retrofit and street lighting rehabilitation are expected to yield benefits in the form of energy savings. Based on an economic cost of

³⁶ As per new Guidelines a 5 percent Discount Rate is recommended for project evaluation - *Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects*

³⁷ Based on ILO data for the Kyrgyz Republic.

³⁸ World Bank (2012), *Europe and Central Asia Balancing Act; Cutting Subsidies, Protecting Affordability, and Investing in the Energy Sector in Eastern Europe and Central Asia Region*

energy of USD 0.27 per kWh, the project-identified activities are expected to yield annual energy efficiency gains amounting to USD 282,310 in the case of schools and USD 46,501 in the case of street lighting.

- **Benefits from avoided losses in case of an earthquake:** Seismic retrofit of schools is expected to reduce the probability of loss of life in case of an earthquake. Based on probabilistic analysis of similar projects,³⁹ we assume that the project will yield benefits in the form of avoided loss of human life that amount to USD 425,000 in NPV. As discussed above, the economic analysis does not consider reconstruction costs or health costs linked to probable injuries.

All project costs, including Components A, B and C, Government's contribution, and expected O&M costs were applied in the economic analysis. Based on these assumptions the **total estimated annual benefits** of the project are USD 2,557,350,⁴⁰ yielding an **ERR** of 16.1 percent and **NPV** of USD 18,559,590. Below is the summary table of the Economic Analysis.

³⁹ <http://www.oecd.org/edu/innovation-education/33629287.pdf>

⁴⁰ For the first 15 years (which is the asset life for street lighting activities). The following 10 years the annual benefits are USD 2,510,850.

Table 1: Economic Analysis – Urban Development Project

ECONOMIC ANALYSIS								1	2 to 14	15	16 to 24	25
Economic analysis ALL PROJECT	Units	2016	2017	2018	2019	2020	2021	2022	...	2036	...	2046
Estimated annual savings from reduced time collecting water - A1	USD/year						440,840	440,840	...	440,840	...	440,840
Estimated annual saving from reducing the water boiled - A1	USD/year						1,226,336	1,226,336	...	1,226,336	...	1,226,336
Benefits from avoided investments in water tanks - A1	USD/year						20,333	20,333	...	20,333	...	20,333
Energy Savings Schools - A2	USD/year						282,310	282,310	...	282,310	...	282,310
Energy Savings Street lighting - A2	USD/year						46,501	46,501	...	46,501	...	46,501
Economic cost of project investment (all components)	USD/year	1,366,800	2,733,600	2,733,600	2,733,600	1,366,800	95,744	95,744	...	95,744	...	95,744
Economic cost of project investment (component A1)	USD/year	841,500	1,683,000	1,683,000	1,683,000	841,500	95,744	95,744	...	95,744	...	95,744
Economic cost of project investment (component A2)	USD/year	355,300	710,600	710,600	710,600	355,300			
SUM (Benefits - Cost) for all project components	USD/year	(1,366,800)	(2,733,600)	(2,733,600)	(2,733,600)	(1,366,800)	1,920,576	1,920,576	...	1,920,576	...	1,874,075
SUM (Benefits - Costs) for component A1	USD/year	(841,500)	(1,683,000)	(1,683,000)	(1,683,000)	(841,500)	1,591,765	1,591,765	...	1,591,765	...	1,591,765
SUM (Benefits - Costs) for component A2	USD/year	(355,300)	(710,600)	(710,600)	(710,600)	(355,300)	328,811	328,811	...	328,811	...	282,310
		(355,300)	(710,600)	(710,600)	(710,600)	(355,300)	583,811	328,811	...	328,811	...	282,310

NPV (USD million)	\$18.560
ERR	16.1%

Social Discount Rate

5.0%

Project Costs	Units	2016	2017	2018	2019	2020	SUM of ALL
Component A: Urban Development	USD million	1.600	3.200	3.200	3.200	1.600	12.800
Component A1 - Municipal Services	USD million	1.13	2.25	2.25	2.25	1.13	9.000
Component A1 - Municipal Services adjusted for VAT	USD million	0.990	1.980	1.980	1.980	0.990	7.920
Component A2- Safe and Energy Efficient Schools	USD million	0.475	0.950	0.950	0.950	0.475	3.800
Component A2- Safe and Energy Efficient Schools adjusted for VAT	USD million	0.418	0.836	0.836	0.836	0.418	3.344
Component B: Institutional Strengthening	USD million	0.088	0.175	0.175	0.175	0.088	0.700
Component C: Implementation Support	USD million	0.113	0.225	0.225	0.225	0.113	0.900
Total project costs (A1+A2+B+C)+O&M A1 and A2	USD	1,608,000	3,216,000	3,216,000	3,216,000	1,608,000	12,864,000

