

# Project Administration Manual

Project Number: 47017-003  
Grant Number:  
November 2014

Republic of Tajikistan: Wholesale Metering and  
Transmission Reinforcement Project

# Contents

## ABBREVIATIONS

I.	PROJECT DESCRIPTION	1
A.	Summary of Project Rationale	1
B.	Impact and Outcome	1
C.	Outputs	1
II.	IMPLEMENTATION PLANS	1
A.	Project Readiness Activities	1
B.	Overall Project Implementation Plan	2
III.	PROJECT MANAGEMENT ARRANGEMENTS	3
A.	Project Implementation Organization – Roles and Responsibilities	3
B.	Key Persons Involved in Implementation	3
C.	Project Organization Structure	4
IV.	COSTS AND FINANCING	5
A.	Detailed Cost Estimates by Expenditure Category	5
B.	Allocation and Withdrawal of Grant Proceeds	6
C.	Detailed Cost Estimates by Financier	6
D.	Detailed Cost Estimates by Outputs/Components	7
E.	Detailed Cost Estimates by Year	8
F.	Contract and Disbursement S-curve	9
G.	Fund Flow Diagram	10
V.	FINANCIAL MANAGEMENT	11
A.	Financial Management Assessment	11
B.	Disbursement	12
C.	Accounting	13
D.	Auditing	13
VI.	PROCUREMENT AND CONSULTING SERVICES	14
A.	Advance Contracting and Retroactive Financing	14
B.	Procurement of Goods, Works and Consulting Services	15
C.	Procurement Plan	15
D.	Outline Terms of Reference for Project Implementation Consultants Services	17
VII.	SAFEGUARDS	26
A.	Environment	26
B.	Land Acquisition and Resettlement (LAR)	27
C.	Indigenous People	27
D.	Poverty and Social	27
VIII.	PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION	28
A.	Project Design and Monitoring Framework	28
B.	Monitoring	29
C.	Evaluation	30
D.	Reporting	30
E.	Stakeholder Communication Strategy	30
IX.	ANTICORRUPTION POLICY	31
X.	ACCOUNTABILITY MECHANISM	32
XI.	RECORD OF PAM CHANGES	32

## **Project Administration Manual Purpose and Process**

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the Government and the Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

Barki Tojik, the Executing Agency is wholly responsible for the implementation of ADB-financed project, as agreed jointly between the borrower and ADB, and in accordance with the Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by the executing and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Grant Negotiations, the Recipient and ADB shall agree to the PAM and ensure consistency with the Grant agreement. Such agreement shall be reflected in the minutes of the Grant Negotiations. In the event of any discrepancy or contradiction between the PAM and the Grant Agreement, the provisions of the Grant Agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.

## ABBREVIATIONS

ADB	—	Asian Development Bank
ADF	—	Asian Development Fund
AFS	—	audited financial statements
APFS	—	audited project financial statements
BT	—	Barki Tojik
DMF	—	design and monitoring framework
EMP	—	environmental management plan
GACAP	—	governance and anticorruption action plan
GDP	—	gross domestic product
ICB	—	international competitive bidding
IEE	—	initial environmental examination
ISA	—	international standards on auditing
KV	—	kilovolt
LIBOR	—	London interbank offered rate
SOPI	—	sector operational performance improvement program
NGOs	—	nongovernment organizations
PAI	—	project administration instructions
PAM	—	project administration manual
PMU	—	project management unit
PPTA	—	project preparatory technical assistance
QCBS	—	quality- and cost based selection
RRP	—	report and recommendation of the president to the board
SBD	—	standard bidding documents
SPS	—	Safeguard Policy Statement
TOR	—	terms of reference
TJS	—	tajik somoni

## I. PROJECT DESCRIPTION

### A. Summary of Project Rationale

1. The proposed project will improve electricity supply to households and industries in Tajikistan. The project will reduce losses through metering entire high- and medium-voltage transmission grid, and expand transmission capacity in Panjakent region presently suffering from load shedding.<sup>1</sup>

### B. Impact and Outcome

2. The impact of the project will be improved electricity supply to households and industry in Tajikistan. The outcome of the project will be expanded and metered transmission network.

### C. Outputs

3. The outputs of the project will be: (i) installation of approximately 1,100 wholesale meters and settlement system including approximately 1,100 current transformers (CTs) and 700 voltage transformers (VTs); and (ii) 95 kilometers (km) of new single circuit single conductor 220 kilovolt (kV) transmission line interconnecting Rudaki and Ayni substations with rated capacity of 320 mega-volt ampere (MVA).

## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

Indicative Activities	2014				2015				Responsibility
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
MoU Signing	X								ADB/GoT
Staff Review Meeting		X							ADB
Grant Negotiations		X							ADB/GoT
Board Consideration				X					ADB
Grant Signing (scheduled)						X			ADB/GoT
Government legal opinion provided							X		GoT
Grant Effectiveness (scheduled)								X	ADB/GoT

ADB = Asian Development Bank, GoT = Government of Tajikistan, MOU = memorandum of understanding.

<sup>1</sup> ADB. 2013. *Technical Assistance to Tajikistan for Wholesale Metering and Transmission Reinforcement Project*. Manila.



### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organization – Roles and Responsibilities

Project organizations	Implementation	Management Roles and Responsibilities
<ul style="list-style-type: none"> <li>Ministry of Energy and Water Resources</li> </ul>		Development of energy sector strategy and overall supervision of investment projects
<ul style="list-style-type: none"> <li>Barki Tojik (executing agency)</li> </ul>		Executing agency for the rehabilitation and for project implementation consultancy services <ul style="list-style-type: none"> <li>power generation, transmission and distribution</li> <li>technical supervision of the project implementation</li> <li>implementation of the project</li> <li>submission of withdrawal applications to ADB, retention of supporting documents, and submission of all reporting requirements</li> <li>compliance with project covenants</li> </ul>
<ul style="list-style-type: none"> <li>Project Management Unit for Electro-Energy Sector*</li> </ul>		<ul style="list-style-type: none"> <li>day-to-day management of activities related to execution of the Project</li> </ul>
<ul style="list-style-type: none"> <li>ADB</li> </ul>		<ul style="list-style-type: none"> <li>main/sole project financier</li> </ul>

\* In 2006 an independent Project Management Unit (PMU) for Electro-Energy was established under the President of Tajikistan. PMU function is to support Barki Tojik in implementation of investment projects financed by international financial organizations including ADB, IsDB, and KfW. PMU provides administrative support and reports to Barki Tojik.

#### B. Key Persons Involved in Implementation

##### Executing Agency

Ministry of Energy and Water Resources

Mr. Usmonali Usmonzoda  
 Position: Minister  
 Telephone: + 992-37-235-35-66  
 Email address: uusmonov@gmail.com

Barki Tojik

Mr. Rustam Mirzo Rahmatzoda  
 Position: Chairman  
 Telephone: +992 37 235 87 66  
 Email address: rahmatzoda\_rm@mail.ru  
 Office Address: 64 I.Somoni Street, Dushanbe

Project Management Unit for Electro-Energy Sector

Mr. Nazar Nazarzoda, Director  
 Position: Executive Director  
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 Email Address: pmu\_tj@mail.ru  
 Office Address: 39 A. Kahorov Str., Dushanbe

##### ADB

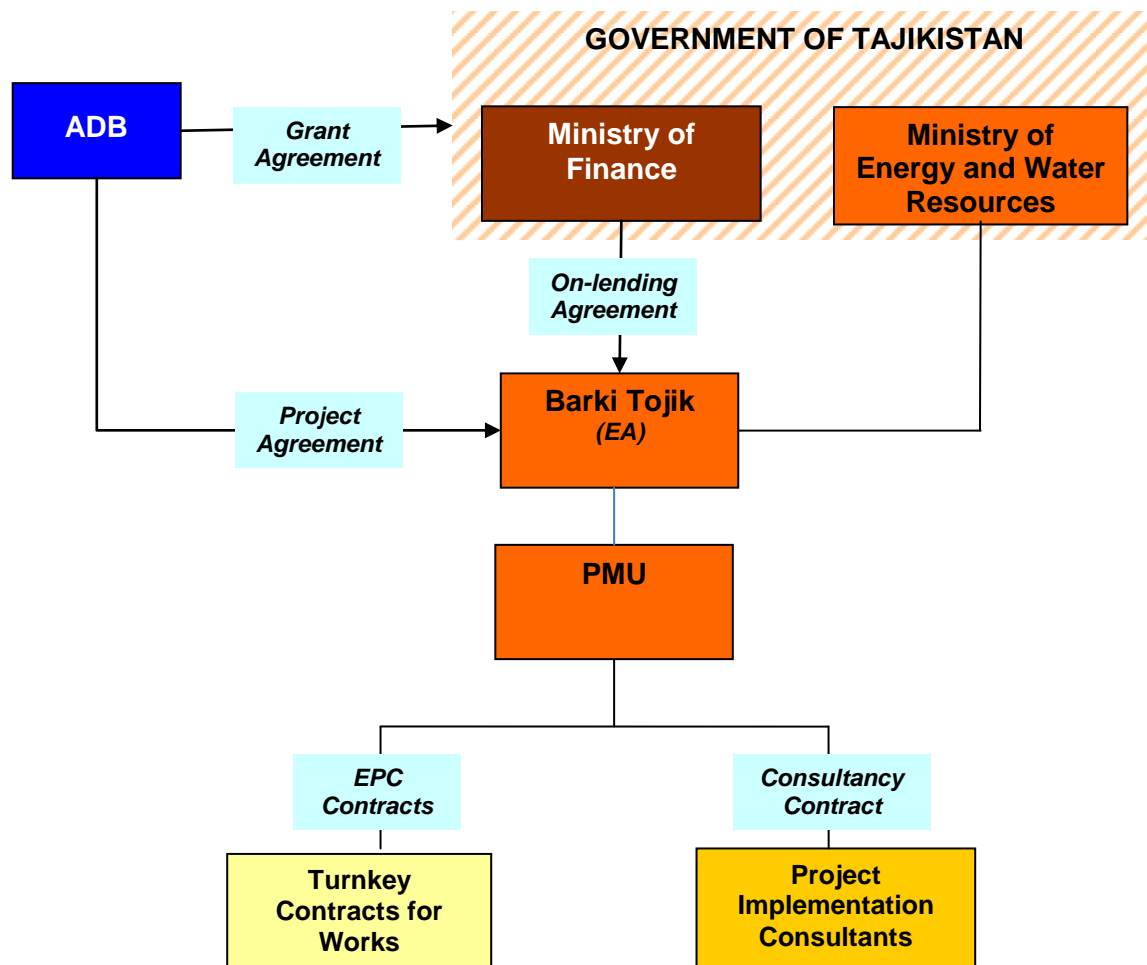
Division Director

Mr. Jim Liston  
 Position: Officer-in-Charge, Energy Division, Central and West Asia Regional Department (CWRD/CWEN)  
 Telephone No.: +632-632-6356  
 Email address: jliston@adb.org

Mission Leader

Mr. Levan Mtchedlishvili  
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### C. Project Organization Structure



ADB = Asian Development Bank; EA = executing agency; EPC = engineering procurement construction; PMU = project management unit.



#### IV. COSTS AND FINANCING

4. The project costs consist of: (i) plant-design, supply and installation contracts for construction of transmission line, and installation of wholesale metering and settlement system; (ii) social mitigation measures; (iii) project implementation consulting services; (iv) physical and price contingencies; and (v) financial charges under the onlending agreement.

- (i) **Plant-design, supply and installation contract.** This will be financed by ADB. The government will either (i) allocate additional funds from the budget to cover value-added tax and customs duties accrued on project expenditures, or (ii) exempt the project from such taxes and duties. Barki Tojik will finance interest during construction and land acquisition costs.
- (ii) **Social Mitigation Measures.** The costs associated with temporary or permanent land acquisition will be financed by Barki Tojik. The government will finance the taxes and duties.
- (iii) **Project implementation consulting services:** This contract will be financed by ADB. The government and Barki Tojik will finance the taxes and duties.
- (iv) **Financial Charges.** Barki Tojik will pay for the financial charges including interest during construction under the onlending agreement between the government and Barki Tojik.

5. The cost of the PMU will be funded by the government and is excluded from the project cost. In addition, the cost of external audit will be borne by the executing agency and is excluded from the Project cost.

##### A. Detailed Cost Estimates by Expenditure Category

Item	(\$ million)		Total Cost	% of Total Base Cost
	Foreign Exchange	Local Currency		
<b>A. Investment Costs <sup>a</sup></b>				
1 Wholesale Metering	10.1	2.0	12.1	22.8%
2 Transmission Lines	21.7	6.7	28.4	53.5%
3 Consulting Services	3.3	1.0	4.3	8.1%
4 Land Acquisition and Resettlement	-	0.3	0.3	0.6%
<b>Subtotal (A)</b>	<b>35.1</b>	<b>10.0</b>	<b>45.1</b>	<b>84.9%</b>
<b>B. Taxes and Duties <sup>b</sup></b>	<b>6.1</b>	<b>1.9</b>	<b>8.0</b>	<b>15.1%</b>
<b>Total Base Cost</b>	<b>41.2</b>	<b>11.9</b>	<b>53.1</b>	<b>100.0%</b>
<b>C. Contingencies <sup>c</sup></b>				
1 Physical	5.3	1.4	6.7	12.6%
2 Price	1.9	0.6	2.5	4.7%
<b>Subtotal (C)</b>	<b>7.2</b>	<b>2.0</b>	<b>9.2</b>	<b>17.3%</b>
<b>D. Financing Charges During Implementation <sup>d</sup></b>		<b>4.7</b>	<b>4.7</b>	<b>8.9%</b>
<b>Total (A+B+C+D)</b>	<b>48.4</b>	<b>18.6</b>	<b>67.0</b>	<b>126.2%</b>

<sup>a</sup> In mid-2014 prices.

<sup>b</sup> Includes taxes and duties of \$8 million for which the government will either (i) allocate additional funds from the budget to cover value-added tax and customs duties accrued on project expenditures, or (ii) exempt the project from such taxes and duties.

<sup>c</sup> Physical contingencies computed at 12% of the base costs including taxes and duties. Price contingencies computed using ADB cost escalation factors and includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest for subloan to Barki Tojik calculated at 5%, to be financed from Barki Tojik resources.

Sources: Asian Development Bank Technical Assistance consultants estimates.

**B. Allocation and Withdrawal of Grant Proceeds**

<b>ALLOCATION AND WITHDRAWAL OF GRANT PROCEEDS</b>				
(Wholesale Metering and Transmission Reinforcement Project)				
<b>CATEGORY</b>			<b>PERCENTAGE OF BANK FINANCING</b>	
<b>Number</b>	<b>Item</b>	<b>Amount Allocated \$ '000</b>	<b>Percentage</b>	<b>Basis for Withdrawal from the Grant Account</b>
1	Plant Design, Supply and Installation Works	40,500	100	of expenditure claimed*
2	Consulting Services	4,300	100	of expenditure claimed*
3	Unallocated	9,200		
	<b>TOTAL</b>	<b>54,000</b>		

\* Exclusive of taxes and duties imposed within the territory of recipient.

**C. Detailed Cost Estimates by Financier**

Item	(\$ million)					
	ADB		Government / Barki Tojik		Total Cost	
	Amount	% of Cost Category	Amount	% of Cost Category		
<b>A. Investment Costs</b>						
1 Wholesale Metering	12.1	100.0%	-	0.0%	12.1	
2 Transmission Lines	28.4	100.0%	-	0.0%	28.4	
3 Consulting Services	5.1	100.0%	-	0.0%	5.1	
4 Land Acquisition and Resettlement	-	0.0%	0.3	100.0%	0.3	
<b>Subtotal (A)</b>	<b>45.6</b>	<b>99.3%</b>	<b>0.3</b>	<b>0.7%</b>	<b>45.9</b>	
<b>B. Taxes and Duties</b>	-	<b>0.0%</b>	<b>7.9</b>	<b>100.0%</b>	<b>7.9</b>	
<b>C. Contingencies</b>	<b>8.4</b>	<b>100.0%</b>	-	<b>0.0%</b>	<b>8.4</b>	
<b>D. Financing Charges During Implementation</b>	-	<b>0.0%</b>	<b>4.8</b>	<b>100.0%</b>	<b>4.8</b>	
<b>Total (A+B+C+D)</b>	<b>54.0</b>	<b>80.6%</b>	<b>13.0</b>	<b>19.4%</b>	<b>67.0</b>	
<b>% of Total Project Cost</b>		<b>80.6%</b>		<b>19.4%</b>		

Sources: Asian Development Bank and Technical Assistance consultants estimates.

## D. Detailed Cost Estimates by Outputs/Components

Item	(\$ million)				
	Total Cost	Wholesale Metering Component 1 Amount	Wholesale Metering Component 1 % of Cost Category	Transmission Lines Component 2 Amount	Transmission Lines Component 2 % of Cost Category
<b>A. Investment Costs <sup>a</sup></b>					
1 Wholesale Metering	12.1	12.1	100.0%	-	0.0%
2 Transmission Lines	28.4	-	0.0%	28.4	100.0%
3 Consulting Services	4.3	2.3	53.5%	2.0	46.5%
4 Land Acquisition and Resettlement	0.3	-	0.0%	0.3	100.0%
<b>Subtotal (A)</b>	<b>45.1</b>	<b>14.4</b>	<b>31.9%</b>	<b>30.7</b>	<b>68.1%</b>
<b>B. Taxes and Duties <sup>b</sup></b>	<b>8.0</b>	<b>2.5</b>	<b>31.3%</b>	<b>5.5</b>	<b>68.8%</b>
<b>Total Base Cost</b>	<b>53.1</b>	<b>16.9</b>	<b>31.8%</b>	<b>36.2</b>	<b>68.2%</b>
<b>C. Contingencies <sup>c</sup></b>					
1 Physical	6.7	3.6	53.7%	3.1	46.3%
2 Price	2.5	0.8	32.0%	1.7	68.0%
<b>Subtotal (C)</b>	<b>9.2</b>	<b>4.4</b>	<b>47.8%</b>	<b>4.8</b>	<b>52.2%</b>
<b>D. Financing Charges During Implementation <sup>d</sup></b>	<b>4.7</b>	<b>1.5</b>	<b>31.9%</b>	<b>3.2</b>	<b>68.1%</b>
<b>Total (A+B+C+D)</b>	<b>67.0</b>	<b>22.8</b>	<b>34.0%</b>	<b>44.2</b>	<b>66.0%</b>

<sup>a</sup> In mid-2014 prices.

<sup>b</sup> Taxes and duties will be exempted by the government.

<sup>c</sup> Physical contingencies computed at 12% of the base costs including taxes and duties. Price contingencies computed using ADB cost escalation factors and includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest for sub-loan to Barki Tojik calculated at 5%, to be financed from Barki Tojik resources.

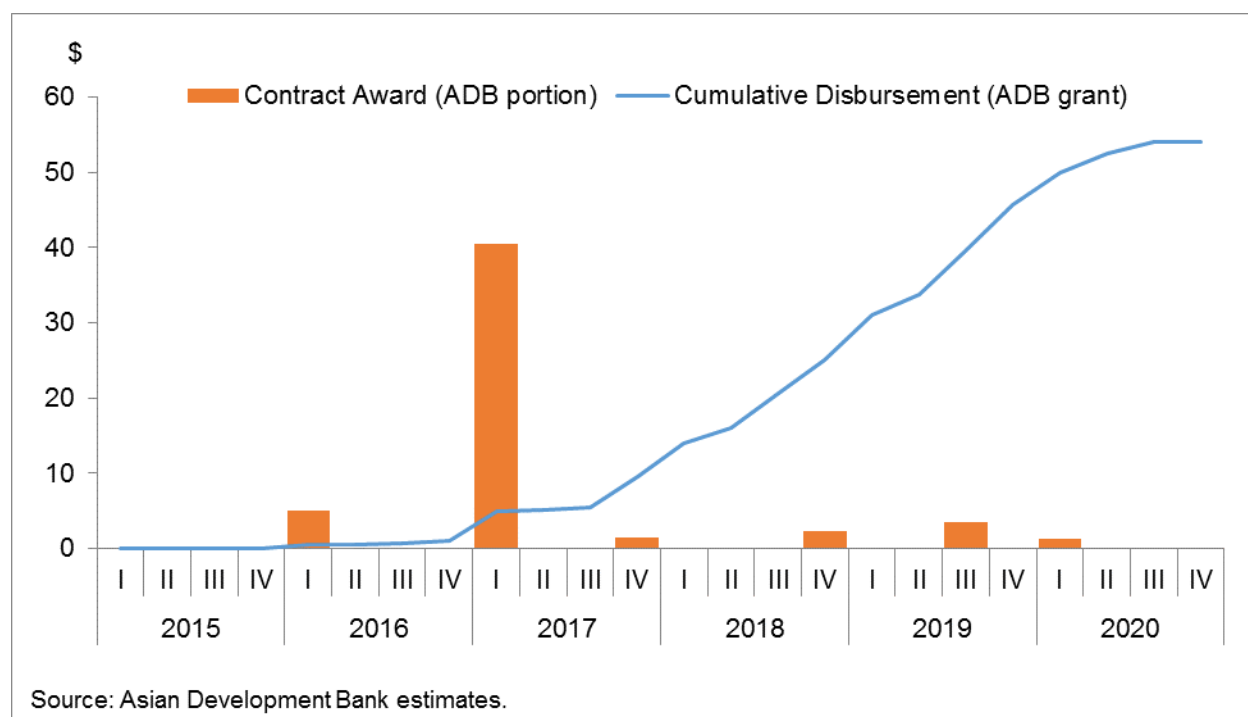
Sources: Asian Development Bank Technical Assistance consultants estimates.

### E. Detailed Cost Estimates by Year

Item	Total Cost	(\$ million)						
		Year 1 2015	Year 2 2016	Year 3 2017	Year 4 2018	Year 5 2019	Year 6 2020	Year 7 2021
<b>A. Investment Costs</b>								
1 Wholesale Metering	12.1	-	-	1.8	3.6	4.8	1.8	-
2 Transmission Lines	28.4	-	-	4.3	8.5	11.4	4.3	-
3 Consulting Services	4.3	-	0.8	0.9	0.9	0.9	0.8	-
4 Land Acquisition and Resettlement	0.3	-	0.3	-	-	-	-	-
<b>Subtotal (A)</b>	<b>45.1</b>	<b>-</b>	<b>1.1</b>	<b>6.9</b>	<b>13.0</b>	<b>17.1</b>	<b>6.9</b>	<b>-</b>
<b>B. Taxes and Duties</b>	<b>8.0</b>	<b>-</b>	<b>0.2</b>	<b>1.2</b>	<b>2.2</b>	<b>2.9</b>	<b>1.2</b>	<b>-</b>
<b>Total Base Cost</b>	<b>53.1</b>	<b>-</b>	<b>1.3</b>	<b>8.2</b>	<b>15.3</b>	<b>19.9</b>	<b>8.1</b>	<b>-</b>
<b>C. Contingencies</b>	<b>9.2</b>	<b>-</b>	<b>-</b>	<b>1.6</b>	<b>2.6</b>	<b>3.8</b>	<b>1.2</b>	<b>-</b>
<b>D. Financing Charges During Implementation</b>	<b>4.7</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>0.7</b>	<b>1.5</b>	<b>2.3</b>	<b>-</b>
<b>Total (A+B+C+D)</b>	<b>67.0</b>	<b>-</b>	<b>1.3</b>	<b>10.0</b>	<b>18.6</b>	<b>25.2</b>	<b>11.5</b>	<b>-</b>
<b>% of Total Project Cost</b>	<b>100%</b>	<b>0.0%</b>	<b>1.9%</b>	<b>14.9%</b>	<b>27.8%</b>	<b>37.6%</b>	<b>17.2%</b>	<b>0.0%</b>

Sources: Asian Development Bank and Technical Assistance consultants estimates.

## F. Contract and Disbursement Projections

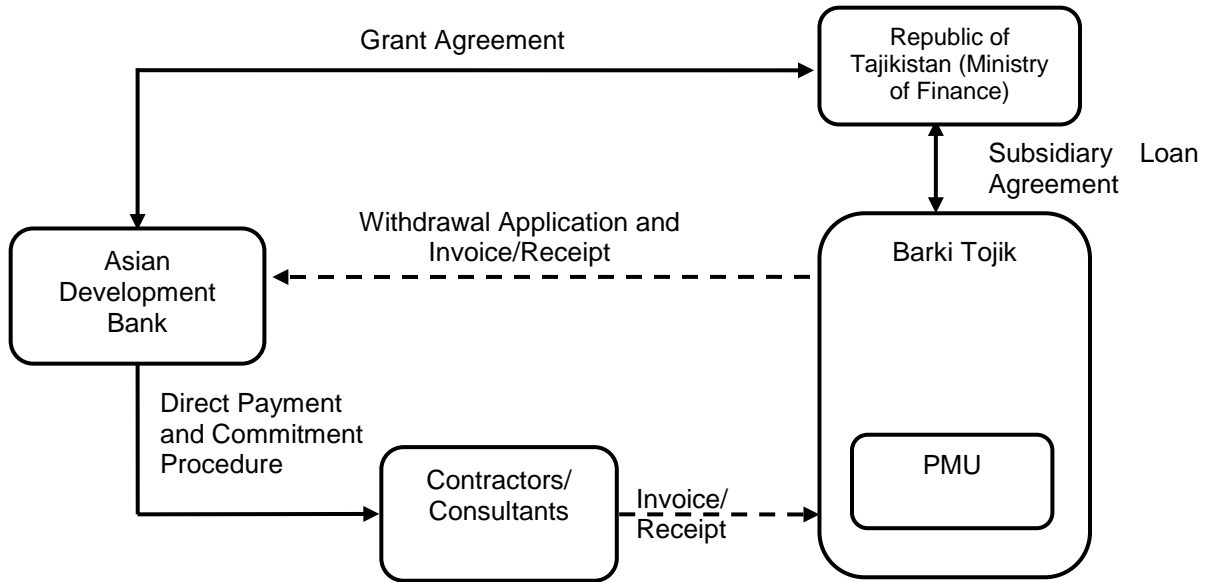


### Baseline Projections for Contract Awards and Disbursement

	Contract Awards (in USD million)					Disbursements (in USD million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2015										
2016	5.1				5.1	0.5		0.3	0.3	1.0
2017	40.5			1.4	41.9	3.9	0.3	0.3	4.1	8.5
2018				2.4	2.4	4.5	2.1	4.5	4.5	15.6
2019				3.4	3.4	5.9	2.7	5.9	6.1	20.7
2020	1.2				1.2	4.1	2.6	1.5		8.3
2021										
<b>Total</b>					<b>54.0</b>					<b>54.0</b>

Note: Includes ADB financing only, excluding unallocated amount.

**G. Fund Flow Diagram**



## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

6. The financial management assessment (FMA) for the project builds on the findings and recommendations identified under previous FMAs conducted on Barki Tojik,<sup>2</sup> and focuses on the major changes and deviations from ADB's guidelines.

7. Barki Tojik's financial management capacity requires improvement. External auditing for fiscal years (FY) 2011 and 2012 based on International Standards on Auditing (ISA) both indicate major issues including (i) valuation of inventory, (ii) revaluation of assets, (iii) records on account receivables and payables, and (iv) data conciliation of revenues. However, substantial efforts are being made to strengthen the financial management capacity. Barki Tojik, funded by the World Bank, is in the process of recruiting international consultants to (i) reevaluate assets in accordance with the International Financial Reporting Standards (IFRS), and (ii) assess the issues related to the account receivables and payables. Automated accounting and billing system is being introduced starting from major cities such as Dushanbe and Khujand. It is expected that there will be positive changes in Barki Tojik's accounting procedures, financial reporting and management reporting systems. This project will also contribute to resolving the issues related to accounts payable/receivable and revenue accounting through the introduction of wholesale metering.

8. Barki Tojik's accounting policies, procedures and financial reporting follows IFRS, which is required under the Law of Accounting and state's decrees.<sup>3</sup> Each of the 30 subordinate entities under the holding company prepares its financial report which is consolidated at the holding company level. Barki Tojik has an internal audit unit established at the head office but with limited independency. External independent auditors are engaged to undertake auditing based on ISA for the holding company in compliant with the statutory requirements.<sup>4</sup>

9. The recent financial performance of Barki Tojik has been weak and unstable, generating losses for FY2007–2009, profits for FY2010–2011, and losses again in FY2012 and in FY2013. The weak and unstable performance may be attributed to a low level of end-user tariffs (an average tariff at 2.2 cents per kilowatt-hour [kWh]), provisions required to accommodate increasing doubtful account receivables, and deteriorated performance of ageing assets. Continued efforts are necessary to steadily increase the tariff level, improve tariff collection efficiency with the adoption of computerized accounting and reporting systems, and modernize and rehabilitate productive assets through investments. It is expected that Bark Tojik's financial performance improves with the supports provided by international financial institutions including ADB and the World Bank.

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<sup>2</sup> ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to the Republic of Tajikistan for the Golovnaya 240 MW Hydropower Plant Rehabilitation Project*. Manila.

<sup>3</sup> Government's Decree 428 of 4 November 2002 for "International Financial Reporting Standards;" Government's Decree 231 of 2 May 2010 for "Additional arrangements for implementing International Financial Reporting Standards in Republic of Tajikistan"; and President's Decree 702 of 25 March 2011 for the "Law of Accounting".

<sup>4</sup> President's Decree 626 for the "Law on Financial Management and Internal Control"; and President's Decree 631 for the "Law on Internal Audit".

**Table 1: Overall Risk Assessment and Risk Mitigation Measures**

<b>Risk</b>	<b>Assessment without Mitigation</b>	<b>Management Plan or Mitigation Measures</b>	<b>Assessment with Mitigation</b>
1. Funds flow arrangements	Moderate	Direct payment method and Letter of Commitment will be used for the contracts financed by ADB. No imprest account. Barki Tojik has a satisfactory record with previous ADB projects.	Low
2. Staffing	Moderate	The SOPI consultants (G0213-TAJ) will address staffing deficiencies through extensive training as defined in their terms of reference. Reorganization will consider appropriate allocation of senior staff members to ensure knowledge is retained.	Low
3. Accounting policies, procedures, and systems	High	The SOPI consultants (G0213-TAJ), together with World Bank assistance for financial capacity development, will work to complete the implementation of IFRS together with a computerised accounting system.  External audit based on ISA to be maintained.  An accounting system will need to be established and maintained for the project, with ADB procedures to be followed to minimize financial risk.	Moderate
4. Internal audit	High	The SOPI consultants (G0213-TAJ), together with World Bank assistance for financial capacity development, will work to improve Barki Tojik's internal audit function.	Moderate
5. External audit	Moderate	Widespread implementation of IFRS under the sector operational improvement project (G0213-TAJ), together with World Bank assistance for financial capacity development, should end the extended period of opinion denial by external auditors.	Low
6. Reporting and monitoring	Substantial	Ongoing corporate restructuring under G0213-TAJ, will improve management reporting practices and result in better decision-making. A new accounting system and following ADB procedures at the PMU, assisted by project implementation consultants, should result in the timely preparation of meaningful reports.	Moderate

ADB = Asian Development Bank; IFRS = international financial reporting standards; ISA = international standards on auditing; PMU = project management unit; SOPI = sector operational performance improvement program.  
Source: Asian Development Bank and technical assistance consultants.

## **B. Disbursement**

10. The Grant proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),<sup>5</sup> and detailed arrangements agreed upon between the government and ADB.

11. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),<sup>6</sup> ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth in Appendix 5 of the SPS.

<sup>5</sup> Available at: [http://www.adb.org/Documents/Handbooks/Loan\\_Disbursement/loan-disbursement-final.pdf](http://www.adb.org/Documents/Handbooks/Loan_Disbursement/loan-disbursement-final.pdf)

<sup>6</sup> Available at: <http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf>



12. The project uses direct payment method and commitment letter procedure for the turnkey contract and for the consulting services. The project management unit (PMU), assisted by project implementation consultants, will prepare disbursement projections, collect supporting documents, and prepare and send withdrawal applications to ADB.

13. Before the submission of the first withdrawal application, the recipient should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the recipient, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is \$100,000, unless otherwise approved by ADB. The recipient is to consolidate claims to meet this limit. Withdrawal applications and supporting documents will demonstrate, among other things, that the goods and/or services were produced in or from ADB members, and are eligible for ADB financing.

14. No withdrawal shall be made from the grant account until (i) a subsidiary loan agreement, in form and substance satisfactory to ADB, has been duly authorized or ratified by, and executed and delivered on behalf of, the government and Barki Tojik; (ii) an appropriate legislation has been passed to provide exemption from taxes and duties on project expenditures or the government has made budgetary allocation to Barki Tojik for the costs of such taxes and duties; (iii) an opening balance sheet for each of the generation, transmission and distribution departments of Barki Tojik, in form and substance acceptable to ADB, has been approved by the Chairman of Barki Tojik in line with the establishment of such departments as set out in the individual restructuring plan;<sup>7</sup> and (iv) an annual budget for FY2016 for each of the generation, transmission and distribution departments of Barki Tojik, in form and substance acceptable to ADB, has been approved by the Chairman of Barki Tojik in line with the establishment of such departments as set out in the individual restructuring plan.

### **C. Accounting**

15. The executing agency will maintain separate books and records by funding source for all expenditures incurred on the project. The executing agency will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

### **D. Auditing**

16. The executing agency will cause the detailed consolidated project financial statements to be audited by an independent auditor acceptable to ADB in accordance with ISA and with the government's audit regulations. The audited financial statements (AFS) for the executing agency and audited project financial statements (APFS) will be submitted in the English language to ADB within six months of the end of the fiscal year by the executing agency.

17. The annual audit report will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether grant proceeds were used only for the purposes of the project or not; and (iii) the level of compliance for each financial covenant contained in the legal agreements for the project.

18. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal project supervision, and followed up regularly with all concerned, including the external auditor.

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<sup>7</sup> The individual restructuring plan of Barki Tojik for the years 2011 to 2018 approved under Government Decree 431 of 30 August 2011 "On approval of individual restructuring plan of Barki Tojik for the period of 2011–2018".

19. The government, executing agency and PMU have been made aware of ADB's approach and procedure on delayed submission, and the requirements for satisfactory and acceptable quality of the APFS.<sup>8</sup> ADB reserves the right to require a change in the auditor in a manner consistent with the constitution of the recipient, or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

20. Public disclosure of the APFS, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011).<sup>9</sup> After review, ADB will disclose the APFS for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. The Audit Management Letter will not be disclosed.

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. Advance Contracting and Retroactive Financing

21. All advance contracting will be undertaken in conformity with ADB's *Procurement Guidelines* (2013, as amended from time to time)<sup>10</sup> and ADB's *Guidelines on the Use of Consultants by the Asian Development Bank and Its Borrowers* (2013, as amended from time to time).<sup>11</sup> The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval.

22. To expedite project implementation, ADB management approved advance contracting of implementation consulting services. Advance contracting allows the government to commence procurement activities, at its own risk, prior to signing of the grant agreement but does not allow to sign a contract with a firm before the grant has become effective. The government was informed that such advance contracting (including advertising) must comply with *Guidelines on the Use of Consultants*. The government and Barki Tojik have been informed that approval of advance contracting does not commit ADB to finance the proposed project.

23. Retroactive financing will not be used.

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<sup>8</sup> ADB's approach and procedure on delayed submission of audited project financial statements:

- When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next six months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next six months.
- When audited project financial statements have not been received within 12 months after the due date, ADB may suspend the loan.

<sup>9</sup> Available at: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

<sup>10</sup> Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

<sup>11</sup> Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>

## B. Procurement of Goods, Works and Consulting Services

24. All procurement of goods and works will be undertaken in accordance with ADB's *Procurement Guidelines*.

### 1. Engineering Procurement Construction

25. Two plant-design, supply and install contracts (EPC) will be procured by Barki Tojik using international competitive bidding (ICB) in accordance with ADB's *Procurement Guidelines*. Procurement will follow ICB procedures using standard bidding documents for plant design, supply, and install contracts. Both EPC contracts will use a single-stage two-envelope bidding procedure without prequalification.

### 2. Consulting Services

26. All consultants will be recruited according to ADB's *Guidelines on the Use of Consultants*.<sup>12</sup>

27. One consulting firm will be recruited to provide project management services. *The consulting firm will be selected and engaged in accordance with ADB's Guidelines on the Use of Consultants by ADB and its Borrowers* (2013, as amended from time to time). Quality- and cost-based selection method with technical:cost weighting of 90:10 will be used.

28. The project implementation consultants will supervise the contractor during project execution. A total of 365 person-months of input will be required over the consulting service duration of approximately 3 years and 10 months. The outline terms of reference for project implementation consulting is in Section F.

29. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding annex is in Section C.

## C. Procurement Plan

### Basic Data

<b>Project Name:</b> Wholesale Metering and Transmission Reinforcement Project (formerly Power Sector Development)	
<b>Project Number:</b> 47017-003	<b>Approval Number:</b>
<b>Country:</b> Tajikistan	<b>Executing Agency:</b> Barki Tojik
<b>Project Financing Amount:</b> US\$ 67,000,000 <b>ADB Financing:</b> US\$ 54,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> US\$ 13,000,000	<b>Implementing Agency:</b> Project Management Unit for Electro-Energy Sector
<b>Date of First Procurement Plan:</b> 24 October 2014	<b>Date of this Procurement Plan:</b> 24 October 2014

<sup>12</sup> Checklists for actions required to engage consultants by method are available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>

## 1. Methods, Thresholds, Review and 18-Month Procurement Plan

### a. Procurement and Consulting Methods and Thresholds

30. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Works (Plant)	US\$ 3,000,000 and Above	

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	90:10

### b. Works (and Plant) Contracts Estimated to Cost \$1 Million or More

31. The following table lists goods and works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Procurement Method	Review (Prior/ Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
Package 1	Wholesale Metering Turnkey	12,100,000.00	ICB without PQ	Prior	1S2E	Q1 / 2016	
Package 2	Transmission Turnkey	28,400,000.00	ICB without PQ	Prior	1S2E	Q1 / 2016	

### c. Consulting Services Contracts Estimated to Cost \$100,000 or More

32. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior/ Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
Package 3	Implementation Consultants	4,300,000.00	QCBS	Prior	Q1 / 2015	FTP	Assignment: International  Quality-Cost Ratio: 90:10

### d. Goods and Works Contracts Estimated to Cost Less than \$1 Million Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)

33. The following table groups smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

Goods and Works								
Package Number	General Description	Estimated Value	Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Advertisement Date (quarter/year)	Comments
None								

Consulting Services								
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior/Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
None								

## 2. Indicative List of Packages Required Under the Project

34. The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Goods and Works							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review (Prior/Post)	Bidding Procedure	Comments
None							

Consulting Services							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Review (Prior/Post)	Type of Proposal	Comments
None							

## D. Outline Terms of Reference for Project Implementation Consultant Services

### 1. Introduction

35. Barki Tojik is the vertically-integrated state-owned electric power utility in Tajikistan. BT is in the process of organizational restructuring to form three separate business units. The three business units will comprise generation, transmission and distribution. The transmission business unit will operate 500/220/110 kV systems and the distribution unit will be responsible for operating systems at 35 kV and below.

36. To facilitate separation of Barki Tojik into business units and eventual commercial operation, a wholesale metering system is to be installed for measuring and recording energy transfers between generation, transmission and distribution. A turnkey contract will be used to effect the metering project works. Draft bidding documentation has been produced for turnkey design, procurement, installation of the entire metering, communications and settlement system including associated training.

37. In addition to the wholesale metering project, Barki Tojik also intends to implement construction of a new 220 kV line from Ayni to Panjakent with associated substation works. A turnkey contract will also be used to effect the transmission line and associated substation project works. Bidding documentation will be produced by Barki Tojik with assistance from the implementation consultants.

38. The PMU of Barki Tojik intends to engage a consulting company, to be known as the implementation consultants, to provide assistance with management, project design, procurement of contractors, supervision and commissioning of both projects. As Barki Tojik has very limited experience of commercial operations involving production, transmission and distribution, drafting a metering code of practice will also be a constituent part of the implementation consultants' tasks.

39. The implementation consultants shall be an engineering consulting firm with sufficient international experience with similar projects, preferably in former Soviet Union countries. The implementation consultants firm shall have competency in the metering, transmission line and substation components of the project.

40. ADB have commissioned Project Preparatory Technical Assistance (PPTA) 8457-TAJ, Wholesale Metering and Transmission Reinforcement. The PPTA report, included with the request for proposal, provides information on the following:

**Metering Project**

- (i) Project feasibility study and due diligence for the proposed wholesale metering project. The study includes technical, economic and financial assessment of the proposed project, and includes due diligence on project impact, outcome, scope, cost, schedule, economic analysis, financial analysis and implementation arrangements.
- (ii) Cost estimates and procurement schedule, for turnkey provision of the wholesale metering system, associated communications and automated billing system.

**Transmission Line Project**

- (i) Project feasibility study and due diligence for proposed 220 kV Ayni - Panjakent line and associated substations.
- (ii) Technical, social, environmental, economic and financial assessment of the project including due diligence on project impact and outcome, scope, cost, schedule, economic analysis, financial analysis and implementation arrangements.

41. While both projects are ostensibly straightforward, there are a number of considerations that must be taken into account during implementation. Principally, these are known considerations that inevitably affect cost and progress. In particular for the metering project the condition of existing current transformers and voltage transformers is not completely understood. A number of existing items have been tested and from this an extrapolation of the likely condition for all current transformers and voltage transformers has been ascertained. For the transmission line, ground conditions in mountainous terrain are uncertain. Consequent cost escalation and time extensions are likely to result. Land acquisition may also have an impact on the transmission line project schedule.

42. Additionally, Barki Tojik has very limited experience with commercial operations between production, transmission and distribution. While metering codes of practice have been developed in all countries with commercially operating power systems, Tajikistan does not have sufficient experience to benefit from the codes of highly developed power systems. As a consequence the implementation consultants shall prepare a metering code of practice suitable for the Tajikistan context. The Metering Code of Practice shall be concerned only with the wholesale metering system between generation, transmission, and distribution. Retail aspects

of commercial operations between distribution and retail customers shall not be included in the document.

43. With the complication of document translations and day-to-day language interpretation, the implementation consultants shall be cognizant of a necessity to provide sufficient competent translation and interpretation resources.

## **2. Objectives of the Assignment**

44. Principal objective of the assignment is to assist the PMU with implementing both the wholesale metering and transmission line projects.

### **Metering Project**

45. Implementation of this project is critical for the success of eventually commercializing Barki Tojik. To assist the PMU in achieving the objective of providing a wholesale metering system for Barki Tojik the implementation consultants shall consider the following objectives:

- (i) effective project administrative support for the PMU;
- (ii) ensuring bid documents are prepared according to ADB procurement guidelines;
- (iii) bid evaluation and reporting complies with ADB and Government of Tajikistan procurement procedures;
- (iv) effective design and engineering input;
- (v) effective contract management;
- (vi) effective financial management;
- (vii) effective quality control of materials, equipment, systems, software and communications;
- (viii) effective management of metering system installation, testing, commissioning, handover and guarantee;
- (ix) capacity enhancement of PMU; and
- (x) produce, disseminate and obtain appropriate acceptance of a draft Code of Practice for the operation of the wholesale metering system.

### **Transmission Line Project**

- (i) effective project administrative support for the PMU;
- (ii) ensuring bid documents are prepared according to ADB procurement guidelines;
- (iii) bid evaluation and reporting complies with ADB and Government of Tajikistan procurement procedures;
- (iv) effective design and engineering input;
- (v) effective contract management;
- (vi) effective financial management;
- (vii) effective quality control of materials, equipment, systems, software and communications;
- (viii) effective management of line and substation installation, testing, commissioning, handover and guarantee;
- (ix) effective environmental and social management; and
- (x) capacity enhancement of PMU.

### **3. Metering Project Scope of Services**

#### **a. Inception Report**

46. Within one month from the effective contract date, the implementation consultants will prepare and submit for the PMU's approval an inception report detailing the services he is to provide, including the training program for capacity enhancement of the PMU. The inception report shall include a project implementation schedule for the metering project. The implementation schedule shall be sustained throughout the assignment with revisions as required. Revisions shall be documented during project progression. The inception report should be not more than 30 pages (excluding attachments).

#### **b. Metering Project**

47. The feasibility study report describes project components and details, as far as is practicable, the quantities and requirements for providing a comprehensive wholesale metering system. An emphasis is placed on provision of an automated wholesale metering system. The purpose of an automated system being to minimize manual input with a subsequent potential for introduction of errors.

48. Draft bid documentation has been prepared by the PPTA consultants and will be provided to the implementation consultants. These draft bid documents shall be reviewed by the implementation consultants and appropriately revised as necessary during discussions with interested parties. The entire works, including training, will be implemented through a turnkey contract. Consequently, the bid documentation shall thoroughly consider functionality of the system to be provided. Training shall provide Barki Tojik personnel with competency and institutional capacity to operate and maintain the new wholesale metering system.

49. The implementation consultants shall provide or develop the final bid documents, with any necessary development from the original draft bid documents, shall include the following:

- (i) description of the work required and expected outcome;
- (ii) design and functionality criteria document for the work to be bid including applicable standards to be used for the project as well as project specific information that the bidder will need for bid preparation and final designs;
- (iii) drawings and schematics for bid preparation;
- (iv) appropriate specifications related to the standards of the design criteria taking into account envisaged expansion of the transmission system;
- (v) billing system specifications;
- (vi) bidder Qualifications forms;
- (vii) bid Forms;
- (viii) bid arrangements;
- (ix) required bonds; and
- (x) bid evaluation criteria.

50. Bid documentation shall be prepared in accordance with ADB standards and guidelines.

51. The implementation consultants will assist PMU with selecting competent contractors in accordance with ADB procurement procedures and will assist with issuing of bid documents to selected bidders.

52. During the bidding period assistance will be given for:



- (i) managing a pre-bid conference;
- (ii) contractors' site visits;
- (iii) receiving and answering of questions raised by bidders during the bid period; and
- (iv) issuance of any required amendments to the bid documents.

53. All compliant bids as determined by PMU shall be reviewed by the implementation consultants. Compliance with design, specifications, contract conditions and schedule shall be examined. Bids determined by the PMU to be not compliant should be examined to ascertain the reason or reasons for rejection from full evaluation.

54. A bid evaluation report shall be provided to PMU and ADB, presenting the findings and opinions of the implementation consultants. Reporting shall consider all criteria relevant to bid evaluation including:

- (i) bidders' qualifications,
- (ii) bid completeness,
- (iii) compliance with bid performance requirements,
- (iv) compliance with technical specifications
- (v) assessment of quality of the proposed supply
- (vi) compliance with schedule requirements,
- (vii) impact of proposed contract exceptions, and
- (viii) omissions or inconsistencies.

55. A draft report including recommendations for selection based on measurable criteria for evaluating bidders shall be submitted within 30 days of receiving bids.

56. Following selection of the preferred contractor and subsequent no objections to proceed with contract negotiations from ADB and Government of Tajikistan, assistance to the PMU is required for:

- (i) negotiations with the preferred bidder in accordance with ADB procurement procedures,
- (ii) formalities associated with award of contract,
- (iii) reviewing advance payment and performance bonds and release of bid bonds,
- (iv) reviewing contractor's insurance,
- (v) reviewing contractor's project schedule and program submitted in accordance with the contract Preparation of a project implementation schedule,
- (vi) notification of award to the successful bid, and
- (vii) notifications to unsuccessful bidders.

57. Drawings and design documents produced by the contractor shall be reviewed by the implementation consultants. Acceptable designs and drawings shall receive letters of "No Objection" to proceed.

58. Before the commencement of the construction stage, the implementation consultants shall establish a project management system to maintain records and coordinate the registration, handling and filing of correspondence, construction drawing data base, progress monitoring, cost control, and reporting.

59. Procedures and methods for reporting and control shall be established by the implementation consultants to document and verify contractors work. Management and Monitoring of Works:

- (i) review project schedules, monitor progress and report on conformity or otherwise;
  - (ii) monitor and report on physical installation works;
  - (iii) monitor and report on communication and software systems installation;
  - (iv) monitor and report on site and electrical safety;
  - (v) review environmental plan, monitor and report conformity or otherwise;
  - (vi) advise PMU on forward requirements for system outages;
  - (vii) examine and report on equipment manufacturers' test and conformity documentation;
  - (viii) initially witness tests on current transformers and voltage transformers;
  - (ix) review current transformers and voltage transformers test results from contractor where tests are not directly witnessed;
  - (x) advise PMU about any unsatisfactory current transformers and voltage transformers and suggest remedial action or additional costs involved with replacement;
  - (xi) review contractor's test and commissioning procedures;
  - (xii) assist PMU with witnessing commissioning tests; and
  - (xiii) issue acceptance certificates.
60. Project financial control shall be exercised by the implementation consultants:
- (i) Agreeing payment schedule.
  - (ii) Certifying payments following verification of each claim.
  - (iii) Analyzing and reporting on financial position.
  - (iv) Review and report on variation or extension claims.
  - (v) Assist PMU in settling claims.
61. Reporting and Monitoring requirements include:
- (i) inception report;
  - (ii) weekly project meetings requiring agenda and minutes;
  - (iii) monthly progress reports;
  - (iv) quarterly reports;
  - (v) annual reports;
  - (vi) completion report; and
  - (vii) monitoring report on Barki Tojik's compliance with the grant agreement covenants and assisting PMU to prepare and submit reports to ADB, track project outputs, outcomes and impacts against ADB's Design Monitoring Framework.
62. All reports shall be in English and Russian. Hard copies of reports in English and Russian will be required in addition to the soft copies. Hard copy quantities will be determined according to Barki Tojik requirements.
63. Barki Tojik has very limited experience with commercial operations between production, transmission and distribution. While metering codes of practice have been developed in all countries with commercially operating power systems, Tajikistan does not have sufficient experience to benefit from the codes of highly developed power systems. As a consequence the implementation consultants shall draft a Metering Code of Practice suitable for the Tajikistan context. The Metering Code of Practice shall be concerned only with the wholesale metering system between generation, transmission and distribution. Retail aspects of commercial operations between distribution and retail customers shall not be included in the document.

64. Presentation to Barki Tojik and other interested parties of the draft Metering Code of Practice is necessary. Following presentation and dissemination of the Metering Code of Practice to decision makers, the implementation consultants shall consider appropriate revisions and meet with interested parties to obtain Barki Tojik acceptance of a final document.

65. Training will be provided by the contractor. Coordination of training involving Barki Tojik personnel and PMU shall be effected by the implementation consultants. Coordination of training will also necessitate the implementation consultants being involved in the personnel selection process.

#### **4. Transmission Line and Associated Substation Works, Project Scope of Services**

##### **a. Inception Report**

66. Within one month from the effective contract date the implementation consultants will prepare and submit to PMU for approval an Inception Report detailing the services to be delivered, including a training program for capacity enhancement of the PMU. The inception report shall include a project implementation schedule for the transmission line project. The implementation schedule shall be sustained throughout the assignment with revisions as required. Revisions shall be documented during project progression. The inception report should be not more than 30 pages (excluding attachments).

##### **b. Transmission Line and Associated Substation Works Project**

67. A project feasibility study and due diligence has been prepared and included in this Terms of Reference for the proposed 220-kV Ayni-Panjakent line and associated substations. The study covers technical, social, environmental, economic and financial assessment of the project including due diligence on project impact and outcome, scope, budget cost, schedule, economic analysis, financial analysis and implementation arrangements. The implementation consultants shall provide and develop the final bid documents and shall include the following:

- (i) description of the work required and expected outcome,
- (ii) design and functionality criteria document for the work to be bid including applicable standards to be used for the project as well as project specific information that the bidder will need for bid preparation and final designs;
- (iii) drawings and schematics for bid preparation,
- (iv) appropriate specifications related to the standards of the design criteria,
- (v) environmental management and monitoring plan,
- (vi) bidder qualifications forms,
- (vii) bid forms,
- (viii) bid arrangements,
- (ix) required bonds, and
- (x) bid evaluation criteria.

68. Bid documentation shall be prepared in accordance with ADB standards and guidelines.

69. The implementation consultants will assist PMU with selecting competent contractors in accordance with ADB procurement procedures and will assist with issuing of bid documents to selected bidders.

70. During the bidding period assistance will be given for:

- (i) managing a pre-bid conference, if required;

- (ii) contractors' site visits;
- (iii) receiving and answering of questions raised by bidders during the bid period; and
- (iv) issuance of any required amendments to the bid documents.

71. All compliant bids as determined by PMU shall be reviewed by the implementation consultants. Compliance with design, specifications, contract conditions and schedule shall be examined. Bids determined by the PMU to be not compliant should be examined to ascertain the reason or reasons for rejection from full evaluation.

72. A bid review report shall be provided to PMU and ADB, presenting the findings and opinions of the implementation consultants. Reporting shall consider all criteria relevant to bid evaluation including:

- (i) bidders' qualifications,
- (ii) bid completeness,
- (iii) compliance with bid performance requirements,
- (iv) compliance with technical specifications,
- (v) assessment of quality of the proposed supply,
- (vi) compliance with schedule requirements,
- (vii) impact of proposed contract exceptions, and
- (viii) omissions or inconsistencies.

73. The report shall include a recommendation for selection based on measurable criteria for evaluating bidders. A draft report shall be submitted within 30 days of receiving bids.

74. Following selection of the preferred contractor and subsequent no objections to proceed with contract negotiations from ADB and Government of Tajikistan, assistance to the PMU is required for:

- (i) negotiations with the preferred bidder in accordance with ADB procurement procedures,
- (ii) formalities associated with award of contract,
- (iii) reviewing advance payment and performance bonds and release of bid bonds,
- (iv) reviewing contractor's insurance,
- (v) reviewing contractor's project schedule and program submitted in accordance with the contract Preparation of a project implementation schedule,
- (vi) notification of award to the successful bid, and
- (vii) notifications to unsuccessful bidders.

75. Drawings and design documents produced by the contractor shall be reviewed by the implementation consultants. Acceptable designs and drawings shall receive letters of "no objection" to proceed. In particular, line profiles and civil works will require close examination.

76. Before the commencement of the construction stage, the implementation consultants shall establish a project management system to maintain records and coordinate the registration, handling and filing of correspondence, construction drawing data base, progress monitoring, cost control, and reporting. Environmental management system shall be established as a part of the project's management system. Procedures and methods for reporting and control shall be established by the implementation consultants to document and verify contractors work. Management and monitoring of works of the implementation consultants include:

- (i) review project schedules, monitor progress and report on conformity or otherwise;
- (ii) monitor and report on physical installation works;

- (iii) monitor and report on site and electrical safety;
- (iv) review and endorse contractor's environmental management plan (CEMP);
- (v) supervise implementation of CEMP;
- (vi) assist in implementation of LARP;
- (vii) assist the executing agency and the local government with necessary public consultations;
- (viii) in conjunction with the contractor and PMU, devise an outage schedule;
- (ix) examine and report on equipment manufacturers' test and conformity documentation;
- (x) witness tests on major equipment items;
- (xi) review contractor's test and commissioning procedures;
- (xii) assist PMU with witnessing commissioning tests; and
- (xiii) issue acceptance certificates.

77. Implementation consultants should ensure that any land acquisition and involuntary resettlement are fully compensated and other requirements stipulated in the LARP is fully implemented before the commencement of works;

78. Project financial control shall be exercised by the implementation consultants:

- (i) agreeing payment schedule,
- (ii) certifying payments following verification of each claim,
- (iii) analyzing and reporting on financial position,
- (iv) review and report on variation or extension claims, and
- (v) assist PMU in settling claims.

79. Reporting and monitoring requirements from the implementation consultants:

- (i) inception report;
- (ii) weekly project meetings requiring agenda and minutes;
- (iii) monthly progress reports;
- (iv) quarterly reports;
- (v) semi-annual environmental monitoring reports;
- (vi) annual reports;
- (vii) completion report; and
- (viii) monitoring report on Barki Tojik's compliance with the grant agreement covenants and assist PMU to prepare and submit reports to ADB, track project outputs, outcomes and impacts against ADB's Design Monitoring Framework.

80. All reports shall be made in English and Russian translation shall be provided.

81. Hard copies of reports in English and Russian will be required in addition to the soft copies. Hard copy quantities will be determined according to Barki Tojik requirements.

82. Any training will be provided by the contractor. Coordination of training involving Barki Tojik personnel and PMU shall be effected by the implementation consultants. Coordination of training will also necessitate the implementation consultants being involved in the personnel selection process.

## **5. Consultant Qualifications, Experts and Person-Months**

83. The consulting firm shall have demonstrable recent experience with:

- (i) specifying and implementing wholesale metering systems for power utilities, including the associated communications and billing systems;
- (ii) specifying and implementing transmission line and associated substation projects;

- (iii) PLC systems and upgrading associated equipment;
- (iv) integration of communication systems;
- (v) assessing condition of high voltage equipment, associated current transformers and voltage transformers;
- (vi) supervising project's environmental performance and implementation of environmental management plan;
- (vii) international bidding procedures and documentation in accordance with ADB guidelines; and
- (viii) commercial operation of wholesale metering and billing systems.

84. Duration of the consulting services is anticipated to be spread over 3 years and 10 months. Person-months and consultant experts are as follows:

	Positions	International Consultants			National Consultants		
		No. of expert	P-M per expert	Total P-M	No. of expert	P-M per expert	Total P-M
1	Team Leader-Metering Engineer	1	36	36	1	36	36
2	Electrical Engineer	1	9	9	2	30	60
3	Communication Engineer	1	9	9	1	24	24
4	Electricity Billing Systems Specialist	1	10	10	1	14	14
5	Computer & Software Specialist	1	6	6	1	9	9
6	Traning Specialist	1	2	2	1	3	3
7	Transmission Line Engineer (Deputy Team Leader)	1	30	30	2	24	48
8	Civil Engineer	1	9	9	2	12	24
9	Transmission Substation Engineer	1	6	6	1	12	12
10	Environmental Specialist	1	3	3	1	6	6
11	Resettlement Sepcialist	1	3	3	1	6	6
	<b>TOTAL</b>	<b>11</b>	<b>123</b>	<b>123</b>	<b>14</b>	<b>176</b>	<b>242</b>

P-M = person-months

## SAFEGUARDS

### E. Environment

85. PMU shall ensure that the design, construction, operation and maintenance of the facilities under the project are carried out in accordance with ADB's Safeguard Policy Statement (2009), the applicable laws and regulations in Tajikistan, and the initial environment examination (IEE). The PMU shall ensure that potential adverse environmental impacts arising from the Project are avoided, minimized or mitigated by implementing all the mitigation and monitoring measures stipulated in the environment management plan (EMP). PMU shall ensure that:

- (i) the EMP is updated by the contractor prior to the implementation of civil works and contractors EMP is prepared;
- (ii) contractor has sufficient resources to implement and record the implementation of the EMP;
- (iii) the detailed engineering design and civil works and other contracts for the Project incorporate applicable environmental measures identified in the IEE and the EMP;
- (iv) PMU, with the help of implementation consultants, shall submit to ADB semi-annual environmental reports for the project within 1 month of the closure of each half of the calendar year during project implementation, and the reports shall include a review of the progress on environmental measures in the IEE and EMP, monitoring of such measures, problems encountered and remedial measures taken; and

- (v) The contractor is supervised to ensure compliance with the requirements of the IEE and the EMP.
86. Contractor is responsible for:
- (i) incorporation of the recommendations of the IEE/EMP into the project design.
  - (ii) preparation of the contractor's (site-specific) EMP, based on generic EMP prepared during the project preparation.
  - (iii) implementation of the EMP during construction.
  - (iv) monitoring and reporting the progress of EMP implementation.
87. Implementation consultants are responsible for:
- (i) supervision of the contractors environmental performance.
  - (ii) reviewing and approval of the contractor's EMP.
  - (iii) preparing semi-annual environmental monitoring reports for ADB.

#### **F. Land Acquisition and Resettlement (LAR)**

88. Classified as category B under ADB's Special Safeguards Policy (SPS).<sup>13</sup> The Project will entail permanent and temporary land acquisition, including impacts to crops and trees.

#### **G. Indigenous People**

89. Classified as category C under ADB's SPS. The Project is not expected to affect indigenous people as defined under the ADB's SPS.

90. Cross reference should be made to the environmental and social safeguards covenants in the Grant Agreement. Pursuant to ADB's SPS, ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth in Appendix 5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list to subprojects financed by ADB.

#### **H. Poverty and Social**

91. A reliable supply of electricity brings very significant benefits to communities (especially poorer ones), including enhanced incomes and livelihoods, improved health and education, better security, and a generally higher standard of living. In Tajikistan, the winter months are particularly difficult for those who lack reliable electricity, and cannot afford adequate alternatives (or must spend much time seeking fuel). Women, in particular, will benefit from the project because of their household and family responsibilities, including gathering fuel for cooking, heating, and processing water; and caring for children, the sick, and the elderly. Electricity also offers women many more opportunities for home-based enterprise and income generation, and has positive impacts on public facilities such as schools and health centers.

92. However, because this project will provide metering in existing substations (which will then supply electricity to the entire grid), as well as a new transmission line and towers, the benefits (although substantial) are generalized and indirect, and do not target particular communities. Similarly, there will not be specific power-supply benefits for particular social groups such as women or the poor, beyond those that accrue to electricity consumers in general. The technological nature of the project allows little scope for social components, and the project provides no opportunities for specific pro-poor initiatives.

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<sup>13</sup> Available at: <http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf>

## VII. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

### A. Project Design and Monitoring Framework

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> Improved electricity supply to households and industries</p>	<p>National electricity transmission system losses reduced from 5% in 2013 to 3.5% in 2025<sup>14</sup></p> <p>Electricity transmission capacity related summer load shedding in Panjakent reduced from 46 MW in 2013 to 0 MW in 2025</p>	<p>Barki Tojik annual reports</p>	<p><b>Assumption</b> Adequate operation and maintenance is provided</p> <p>The government is committed to increase tariff to cost recovery level</p> <p><b>Risk</b> Inappropriate corporate structure and weak financial management</p>
<p><b>Outcome</b> Expanded and metered transmission network</p>	<p>196 high and medium voltage substations metered and interconnected to central AMI and settlement system in 2019</p> <p>Transmission capacity in Panjakent region increased from 67 MVA in 2013 to 320 MVA in 2019</p>	<p>Barki Tojik annual and audit reports</p> <p>Project implementation consultants progress reports</p>	<p><b>Assumption</b> The government is committed to reorganize Barki Tojik to improve its operational performance</p>
<p><b>Output</b> 1. Wholesale metering and settlement system functional</p>	<p>1,100 wholesale meters and billing system including 1,100 CTs and 700 VTs functional in 2019</p>	<p>Barki Tojik annual reports</p> <p>Commissioning Certificate</p> <p>Project</p>	<p><b>Assumption</b> Competent personnel trained in Barki Tojik</p>

<sup>14</sup> Higher accuracy level of meters and current and voltage transformers will reduce non-technical transmission losses by 1.5%. Presently, transmission losses are estimated at 5%, although this figure might be understated due to absence of proper transmission level metering.



Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
2. Rudaki-Ayni transmission line operational	95 km of 220 kV single circuit overhead transmission line commissioned in 2019	implementation consultants completion report  Barki Tojik annual reports  Commissioning Certificate  Project implementation consultants completion report	
<b>Activities with Milestones</b> <b>1. Wholesale metering and settlement system</b> 1.1 Recruitment of implementation consultants (January 2016) 1.2 Bid initiation, evaluation and award (February 2017) 1.3 Installation works (October 2019).  <b>2. Rudaki-Ayni transmission line</b> 2.1 Bid initiation, evaluation and award (February 2017). 2.2 Installation works (October 2019).		<b>Inputs</b>  <b>ADB (ADF Grant): \$54 million</b> <b>Government and Barki Tojik: \$13 million</b>	

ADB = Asian Development Bank; ADF = Asian Development Fund; AMI = advanced metering infrastructure; CT = current transformer; km = kilometer; kV = kilovolt, MVA = megavolt ampere; MW = megawatt; VT = voltage transformer

## B. Monitoring

93. **Project performance monitoring.** Barki Tojik and project implementation consultants will prepare separate progress reports for the project and submit to ADB on a quarterly basis within 30 days from the end of each quarter. The reports will provide a narrative description of progress made during the period, changes in the implementation schedule, problems or difficulties encountered, performance of the project implementation consultants, and the work to be carried out in the next period. The progress reports will also include a summary financial account for the project, consisting of project expenditures for the year to date and total expenditure to date. Performance will be evaluated on the basis of indicators and targets stipulated in the design and monitoring framework.

94. The following indicators will be updated in the quarterly reports, semi-annual meetings and midterm review which is expected in three years from the date of the grant effectiveness:

- (i) Detailed design completed
- (ii) Equipment including 125MVA transformers ordered

- (iii) Equipment delivered to the sites
- (iv) Reconstruction of Rudaki substation completed
- (v) Reconstruction of Ayni substation completed
- (vi) 220kV transmission line constructed
- (vii) Rudaki-Ayni 220kV transmission line energized
- (viii) Replacement of Current Transformers completed
- (ix) Replacement of Voltage Transformers completed
- (x) Installation of communication systems completed
- (xi) Installation of wholesale meters completed
- (xii) Installation of the settlement system completed
- (xiii) Wholesale metering and settlements system commissioned.

95. **Compliance monitoring.** Grant agreement covenants – policy, legal, financial, economic, environmental, social safeguards and other – will be monitored through semi-annual project meetings and the midterm review.

96. **Safeguards monitoring** will be performed by the consultants and PMU and the results will be included in the quarterly progress reports and semi-annual Environmental Monitoring Reports. Such monitoring should adhere to the requirements in IEE, EMP, and LARP.

97. **Poverty and social action plans:** Quarterly progress reports, semi-annual project meetings and midterm review.

### C. Evaluation

98. Within six months of project physical completion, Barki Tojik will submit a completion report to ADB.<sup>15</sup>

### D. Reporting

99. Barki Tojik will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system: (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for next 12 months, (iii) semi-annual environmental monitoring report, and (iv) a completion report within 6 months of physical completion of the project. To ensure projects continue to be both viable and sustainable, project financial accounts and the executing agency's audited financial statements, together with the associated auditor's report, should be adequately reviewed.

### E. Stakeholder Communication Strategy

100. Project information will be disseminated through media at the main milestones including grant agreement signing, plant-design, supply, and install contract awards and project completion. Grievance redress mechanisms will be established at project site gates, by phone, email and through public consultations. The following table outlines the framework of communication strategy was adopted for the project.

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<sup>15</sup> Project completion report format available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

Project Documents	Means of Communication	Responsible Party	Frequency	Audience(s)
Project Information Documents (PID)	ADB's website	ADB	Initial PID no later than 30 calendar days of approval of the concept paper, quarterly afterwards.	General public
Design and Monitoring Framework (DMF)	ADB's website	ADB	After Board consideration	Project-affected people
Initial Environment Examination (IEE)	ADB's website	ADB	Posted on 30 September 2014	General public, project-affected people in particular
Land Acquisition and Resettlement Plan (LARP)	ADB's website	ADB	Posted on 30 September 2014	General public, project-affected people in particular
Report and Recommendations of the President	ADB's website	ADB	Within 2 weeks after Board consideration of the grant	General public
Legal Agreements	ADB's website	ADB	Within 2 weeks after Board consideration of the grant	General public
Initial Poverty and Social Assessment	ADB's website	ADB	Within 2 weeks of completion	General public, project-affected people in particular
Documents produced under Technical Assistance	ADB's website	ADB	Within 2 weeks of completion	General public
Project Administration Memorandum	ADB's website	ADB	Within 2 weeks after Board consideration of the grant	General public, project-affected people in particular
Major Change in Scope	ADB's website	ADB	Within 2 weeks of approval of the change	General public
Progress Reports	ADB's website	ADB	Within 2 weeks of circulation to Board or management approval	General public
Completion Reports	ADB's website	ADB	Within 2 weeks of circulation to Board for information	General public
Evaluation Reports	ADB's website	ADB	Routinely disclosed, no specific requirements	General public

### VIII. ANTICORRUPTION POLICY

101. The Recipient shall comply with ADB's *Anticorruption Policy*<sup>16</sup> (1998, as amended to date) for the purposes of the project. The Recipient, consistent with its commitment to good governance, accountability and transparency, agrees (a) that ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the project and (b) to cooperate fully with any such investigation and to extend all necessary assistance. The Recipient shall ensure that all contracts financed by ADB under the project include provisions specifying the right of ADB to audit and examine the records and accounts of the Barki Tojik and all contractors, suppliers, consultants, and other service providers as they relate to the project.<sup>17</sup>

102. To support these efforts, relevant provisions are included in the grant agreement and the bidding documents for the Project.

<sup>16</sup> Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

<sup>17</sup> ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

## **IX. ACCOUNTABILITY MECHANISM**

103. People who are, or may in the future be, adversely affected by the project may address complaints to ADB, or request the review of ADB's compliance under the Accountability Mechanism.<sup>18</sup>

## **X. RECORD OF PAM CHANGES**

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<sup>18</sup> For further information see: <http://compliance.adb.org/>.