# **Project Administration Manual**

Project Number: 46348

Loan and/or Grant Number(s): {LXXXX; GXXXX}

October 2014

Kyrgyz Republic: Toktogul Rehabilitation Phase 2 Project

# Contents

I.	PROJECT DESCRIPTION	1
II.	IMPLEMENTATION PLANS	3
	<ul><li>A. Project Readiness Activities</li><li>B. Overall Project Implementation Plan</li></ul>	3 4
III.	PROJECT MANAGEMENT ARRANGEMENTS	5
	<ul> <li>A. Project Implementation Organizations–Roles and Responsibilities</li> <li>B. Key Persons Involved in Implementation</li> <li>C. Project Organization Structure</li> </ul>	5 6 6
IV.	COSTS AND FINANCING	9
	<ul> <li>A. Detailed Cost Estimates by Expenditure Category</li> <li>B. Allocation and Withdrawal of Loan/Grant Proceeds</li> <li>C. Detailed Cost Estimates by Financier</li> <li>D. Detailed Cost Estimates by Outputs/Components</li> <li>E. Detailed Cost Estimates by Year</li> <li>F. Contract and Disbursement S-curve</li> <li>G. Fund Flow Diagram</li> </ul>	10 11 12 13 14 15
V.	FINANCIAL MANAGEMENT	20
	<ul><li>A. Financial Management Assessment</li><li>B. Disbursement</li><li>C. Accounting</li><li>D. Auditing</li></ul>	20 25 25 26
VI.	PROCUREMENT AND CONSULTING SERVICES	28
	<ul> <li>A. Procurement Capacity Assessment</li> <li>B. Contracting and Retroactive Financing</li> <li>C. Procurement of Goods, Works and Consulting Services</li> <li>D. Procurement Plan</li> <li>E. Consultant's Terms of Reference</li> </ul>	28 29 29 30 34
VII.	SAFEGUARDS	46
VIII.	GENDER AND SOCIAL DIMENSIONS	47
IX.	PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION  A. Project Design and Monitoring Framework B. Monitoring C. Evaluation D. Reporting E. Stakeholder Communication Strategy	48 48 50 50 51
Χ.	ANTICORRUPTION POLICY	52
XI.	ACCOUNTABILITY MECHANISM	53
XII.	RECORD OF PAM CHANGE	53

### **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 Government and 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.

The State Property Fund, The Ministry of Energy and Industry and the Open Joint-Stock Company Electric Power Plants are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by The State Property Fund, The Ministry of Energy and Industry and the Open Joint-Stock Company Electric Power Plants of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

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

BD = bidding documents

CAPS = Central Asian Power System
CQS = consultants' qualification selection
DMF = design and monitoring framework

EA = executing agency

EMP = environmental management plan

EPP = Open Joint-Stock Company Electric Power Plants

ERP = Enterprise Resource Planning

EOI = expression of interest

GACAP = governance and anticorruption action plan

GOKR = Government of Kyrgyz Republic

GWh = gigawatt-hour

HPP = hydroelectric power plant

ICB = international competitive bidding
IEE = initial environmental examination

kWh = kilowatt-hour

LAR = land acquisition and resettlement MOEI = Ministry of Energy and Industry

MOF = Ministry of Finance

MW = megawatt

NEGK = Open Joint-Stock Company National Electric Grid of Kyrgyzstan

PAI = project administration instructions
PAM = project administration manual
PIC = project implementation consultant

PIU = project implementation unit PPL = public procurement law

QCBS = quality- and cost based selection

RFP = request for proposal

RRP = report and recommendation of the President to the Board

SFS = Safeguard Policy Statement SBD = standard bidding documents

TC = tender commission TOR = terms of reference

### I. PROJECT DESCRIPTION

### A. Objectives

- 1. The project will (i) continue the phased rehabilitation of Toktogul hydroelectric power plant (HPP) by replacing two of the four existing generator and turbine units and associated auxiliary equipment; (ii) prepare an asset inventory and revaluation for the seven power companies, and Bishkekteploset (heat and hot water distribution company); (iii) prepare a power sector master plan to include a due diligence study for the rehabilitation of Uch Kurgan HPP; and (iv) implement a business process improvement project for the main generation company, Open Joint-Stock Company Electric Power Plants (EPP). The project will increase domestic energy supply and international electricity trade, improve asset management and sector planning, and strengthen sector operational performance. The project complements ongoing sector developments in asset rehabilitation, system loss reduction, tariff policy, and sector governance.
- 2. The Kyrgyz Republic power sector is characterized by ageing assets, high commercial losses, below-cost tariffs, and poor performance of sector companies. Power sector assets are over 30 years old and approaching the end of their economic life. This results in reduced reliability and high system technical losses (15% of net supply). The sector also suffers from high commercial losses (15% of net supply), poor financial management and performance, and tariffs that are below cost recovery. Following exceptionally high growth in domestic demand (50% from 2009 to 2013), there is a critical need for major rehabilitation, replacement, and augmentation of sector assets.
- 3. The government has identified development of the energy sector as a major component of its development plan.<sup>3</sup> The government's strategy is to (i) improve sector financial performance and corporate management, (ii) increase energy security by development of domestic resources, (iii) expand regional power exports, and (iv) phase in cost-recovery tariffs by 2017.
- 4. Over \$5 billion of investment in the generation and transmission subsectors is planned in 2014–2024, including \$4 billion of proposed commercial export-oriented HPPs to be developed by the private sector. While the private sector projects are under active development, financing is not confirmed. The project focuses on the immediate priority of ensuring domestic supply.
- 5. EPP, the owner and operator of Toktogul HPP, wishes to implement the complete rehabilitation of the Toktogul HPP. Toktogul HPP is the country's largest and most important power plant, with installed capacity of 1,200 MW. It produces 40% of the country's average electricity output, and is critical both as a domestic power source and for power export; it also provides frequency regulator services to the Central Asian power system. Toktogul HPP was placed into service in 1975, and has undergone no significant rehabilitation. Critical equipment components are failing, resulting in availability dropping to 80%; a continued decline in availability is expected in the absence of rehabilitation. An assessment concluded that all the

\_

The power sector consists of two generation companies, EPP and Chakan GES; one electrical-grid transmission company, National Electrical Grid of Kyrgyzstan; and four regional electricity distribution companies: Vostokelectro (eastern region), Oshelectro (Osh and Batken regions), Jalalabatelectro (southern Jalalabat region), and Severelectro (Bishkek, Chuy, and Talas regions).

The Asian Development Bank (ADB) provided project preparatory technical assistance for the Toktogul Rehabilitation Project Phase 2 (TA 8434-KGZ).

<sup>&</sup>lt;sup>3</sup> Government of the Kyrgyz Republic. 2013. *The Kyrgyz Republic Sustainable Development Program, 2013–2017.* Bishkek. Approved by Government Resolution No. 3694-V on 18 December 2013.

HPPs on the Naryn Cascade require rehabilitation; rehabilitation of Toktogul HPP was identified as the highest priority. Failure of Toktogul HPP would affect the stability of the Central Asian power system and be catastrophic for the Kyrgyz Republic's electricity supply.

- 6. The complete rehabilitation of Toktogul HPP is planned over a three-phase program. The first ongoing phase under ADB financing covers replacement of secondary electrical and mechanical equipment, which was identified as the top priority.<sup>5</sup> The proposed project constitutes the second phase, and will rehabilitate two of the four turbine and generator units. The proposed project is included in the Asian Development Bank's (ADB) country operations business plan for the Kyrgyz Republic, 2014–2016.<sup>6</sup> The third phase will rehabilitate the two remaining turbine and generator units and will carry out repairs to civil structures as may be identified by an ongoing dam safety assessment study being financed by ADB. Each phase is a standalone project that is independent of each other. The three-phase program is consistent with ADB's country partnership strategy for the Kyrgyz Republic.
- 7. Ongoing ADB and donor projects are assisting the government in addressing (i) loss reduction by establishment of an independent electricity settlement center and installation of wholesale and retail meters; (ii) policy reform through establishment of an independent regulator, introduction of a cost-recovery tariff, and implementation of an information program to inform the public of the need for tariff increases; (iii) sector-wide asset rehabilitation; and (iv) commercial strengthening of sector companies through improved governance and business processes.
- 8. Additional sector issues to be addressed to ensure sector viability include (i) poor operational performance of EPP because of deficient governance and management procedures and practices, and inadequate business systems; (ii) absence of an up-to-date power sector master plan leading to sub-optimal sector development; (iii) weak asset inventory and valuation, which inhibits financial control; and (iv) preparation for the rehabilitation of the 180 MW Uch Kurgan HPP, the next priority project after Toktogul.
- 9. Tariffs are below cost recovery, with a 2013 weighted average consumer tariff of Som0.92 per kilowatt-hour (kWh). The government will implement a phased tariff increase in accordance with its medium-term tariff plan, which will increase the weighted average tariff in 2017 to Som1.43/kWh.<sup>7</sup> The government is empowered to implement such a tariff increase following decisions by the Parliament (in June 2014) and by the President (in July 2014) to transfer tariff approval authority from Parliament to the government. In July 2014, Parliament also approved legislation to create an independent energy regulator and an independent market settlement operator.

### B. Impact, Outcome and Outputs

10. The impact will be increased reliability of national and regional power systems. The outcome will be improved operational performance of EPP.

<sup>6</sup> ADB 2013. Kyrgyz Republic: Country Partnership Strategy, 2013–2017. Manila; ADB. 2013. Country Operations Business Plan: Kyrgyz Republic, 2014–2016. Manila.

<sup>&</sup>lt;sup>4</sup> ADB. 2010. Technical Assistance to the Kyrgyz Republic for the Power Sector Rehabilitation Project. Manila (TA-7704-KGZ).

<sup>&</sup>lt;sup>5</sup> ADB. 2012. Report and Recommendation of the President to the Board of Directors: Proposed Loan and Grant to the Kyrgyz Republic for the Power Sector Rehabilitation Project. Manila (Loan 2869-KGZ and Grant 0294-KGZ).

Government of the Kyrgyz Republic. 2014. *Medium-Term Tariff Plan for Electricity and Heating Sectors for 2014–2017*. Bishkek. Approved by Government Resolution No. 336 on 17 June 2014.

# C. Outputs

- 11. The project will have the following outputs:
  - (i) rehabilitation of generator and turbine units 2 and 4 of Toktogul HPP;
  - (ii) preparation of an asset inventory and revaluation of all seven power sector companies and Bishkekteploset;
  - (iii) preparation of a power sector master plan, which includes (a) a 20-year demand projection, (b) identification of new and rehabilitation generation and transmission projects, (c) computation of annual and seasonal export and import trade, (d) a 10-year capital expenditure plan, and (e) a feasibility study for the rehabilitation of Uch Kurgan HPP; and
  - (iv) implementation of a business process improvement project for EPP to (a) assess current governance and business processes and propose a modernization plan, and (b) design and implement an enterprise resource planning (ERP) system.

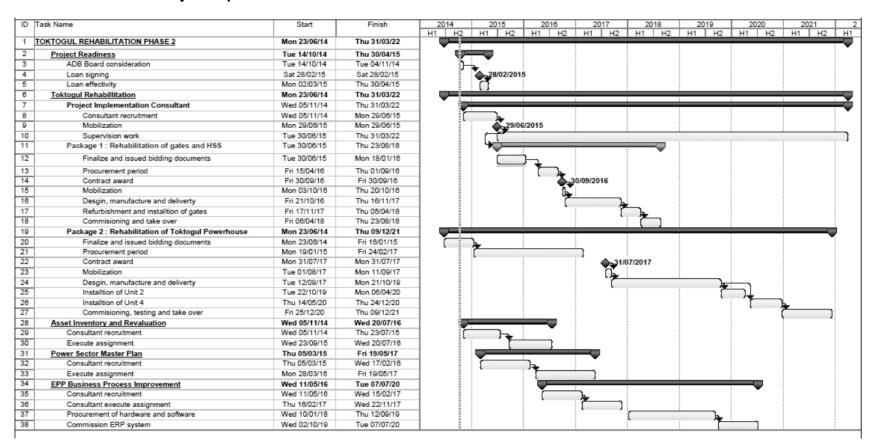
### III. IMPLEMENTATION PLANS

# A. Project Readiness Activities

Indicative Activities				2014				2015				Responsibility			
Indicative Activities	6	7	8	9	10	11	12	1	2	3	4	5	responsibility		
Advance contracting actions				Х									ADB-EPP		
Loan/grant negotiations				Х									EA		
ADB Board consideration						Χ							ADB		
EDB Council consideration							Х						EDB		
Financing agreement, project agreement and subsidiary financing agreement signing									Х				ADB-EDB-GOV		
Government legal opinion provided									Х				GOV		
Government budget inclusion										Х			GOV		
Subsidiary financing agreement effectiveness										Х			GOV-EPP		
EDB loan effectiveness										Χ			GOV-EDB		
ADB loan effectivenss											Χ		GOV-ADB		

ADB = Asian Development Bank, EA = executing agencies, EDB = Eurasian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, GOV = Government of Kyrgyz Republic.

### B. Overall Project Implementation Plan



# IV. PROJECT MANAGEMENT ARRANGEMENTS

# A. Project Implementation Organizations-Roles and Responsibilities

Project implementation organizations	Management Roles and Responsibilities							
Ministry of Finance (MOF)	Borrower  Ministry representing external borrowing.  Ensuring financing proceeds are used in accordance with Subsidiary Financing Agreement.  Handling of issues pertaining to project-related taxes and duties.							
<ul> <li>Ministry of Energy and Industry (MOEI)</li> </ul>	<ul> <li>Executing agency (EA)</li> <li>EA for power sector master plan.</li> <li>Sector policy.</li> <li>Supervision of physical investment component.</li> </ul>							
State Property Fund (SPF)	Executing agency (EA)  > EA for asset inventory and revaluation.							
Open Joint-Stock Company Electric Power Plants (EPP)	<ul> <li>Executing agency (EA)</li> <li>EA for Toktogul HPP rehabilitation and improvement of business process.</li> <li>EA for business process improvement.</li> <li>Supervisor for project implementation consultant and engineering contractors.</li> <li>Funding of project Implementation unit recurrent cost.</li> </ul>							
Asian Development Bank	<ul> <li>Lender</li> <li>Main project financier.</li> <li>Providing timely guidance at each stage of project implementation in accordance with the agreed implementation arrangements.</li> <li>Review all the documents that require ADB approval.</li> <li>Conduct an inception mission, periodic loan review missions, a midterm review, a completion mission for the project, and an overall project completion mission.</li> <li>Monitor and require compliance of all loan covenants.</li> <li>Timely process withdrawal applications and release eligible funds.</li> </ul>							
Eurasian Development Bank	<ul> <li>Lender</li> <li>Project cofinancier.</li> <li>Review all the documents that require EDB approval.</li> <li>Monitor and require compliance of all loan covenants.</li> </ul>							

Timely process withdrawal applications and release eligible funds.

## B. Key Persons Involved in Implementation

### **Executing Agency**

MOEI Officer's Name Aibek Kaliev

Position Deputy Minister

Email address

Office Address 119 Ahunbaev Street, Bishkek, 72005

SPF Officer's Name Bakyt Sharshenaliev

Position Vice Chairman Email address bakyt1416@mail.ru

Office address 151, Moskovskya Street, Bishkek

EPP Officer's Name Joldoshbek Nazarov

Position Deputy General Director

Email address ipiu@es.kg

Office address 326 Jibek Jolu Prospect, Bishkek

ADB

Central and West Asia Energy Staff Name Jim Liston

Division (CWEN) Position CWEN Officer-in-Charge

Email address <u>ilistn@adb.org</u>

Telephone No. +63-2-632-6118/6151

Mission Leader Staff Name Jim Liston

Position Principal Energy Specialist

Email address <u>iliston@adb.org</u>
Telephone No. +63-2-632-6118/6151

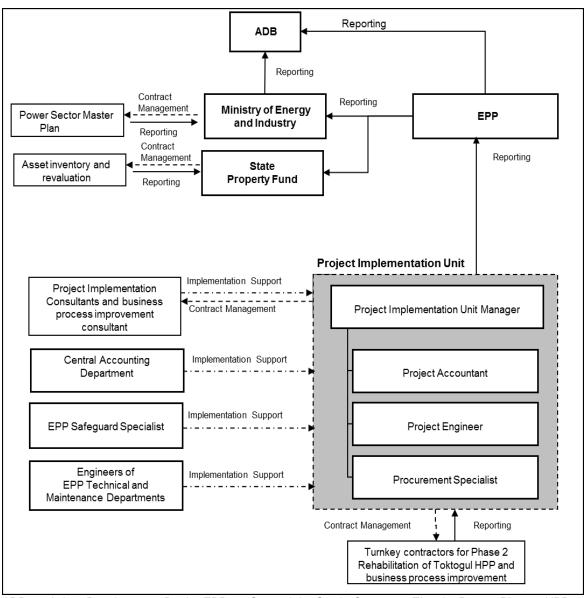
### C. Project Organization Structure

- 12. EPP will established a dedicated full time project implementation unit (PIU) which will administer all consulting and procurement contracts on behalf of EPP. It will be responsible for bid evaluation, contact award, construction supervision, and reporting to the Government and ADB.
- 13. The PIU manager will report directly to the General Director of EPP and will be the main point of contact for working communication between EPP and ADB. The PIU will also coordinate the consultants and contractors.
- 14. An international consulting firm, Fichtner GmbH & Co. KG, has been recruited under ADB TA 8434 to support EPP to (i) prepare technical analysis report for Toktogul HPP phase 2 rehabilitation, and (ii) prepare bidding documents. Technical analysis report was delivered in September 2014. Draft bidding documents are expected to be delivered by December 2014.

- 15. The PIU, assisted by PIC, will submit necessary project plans, tender evaluation reports, progress reports, applications for withdrawal of funds, and any other required reports to ADB, EDB and the Government.
- 16. The PIU manager and PIU staff will have appropriate academic qualifications with significant experience working on large investment projects and hydropower plant. The PIU manager will be a senior manager with experience in project implementation and operation, and must be familiar with development partners' funded projects. The project engineer and project accountant will have relevant experience and academic qualification in their specialty area. The procurement specialist will have required academic qualifications with significant experience in procurement of consultants and contractors.
- 17. The terms of reference of the PIU Manager and staff are as follows:

Position	Terms of Reference
PIU Manager	<ul> <li>Provide overall direction and management of PIU.</li> <li>Focal point of PIU in communicating and reporting with ADB, MOE, and MOF.</li> <li>Responsible for control of schedule, quality, quantity, cost, and safety of the physical investments of the project.</li> <li>Ensure all project covenants relevant to EPP are met.</li> <li>Ensure all safeguard requirements are satisfied.</li> <li>Ensure that the General Director of EPP is apprised of implementation status on an ongoing basis.</li> </ul>
Project Engineer	<ul> <li>Assist PIU manager in the delivery of his/her duties.</li> <li>Manage PIC and contractors.</li> <li>Monitor and supervise consultants' and contractors' progress.</li> <li>Coordinate with engineers from technical and maintenance department on supervising the installation and commissioning of equipment for the power plant.</li> </ul>
Procurement Specialist	<ul> <li>Prepare request for proposals of consulting services for project implementation.</li> <li>Lead evaluation of bids and preparation of bid evaluation reports.</li> <li>Lead consultants' contract negotiations and award of contracts.</li> <li>Lead contract awards and any negotiations required prior to the award.</li> <li>Manage consultants and their contracts.</li> </ul>
Project Accountant	<ul> <li>Maintain separate project financial statements.</li> <li>Prepare withdrawal applications.</li> <li>Monitor loan covenants.</li> <li>Prepare project financial reports.</li> <li>Coordinate with EPP's central accounting department.</li> </ul>
Safeguard Specialist (Operation and Technical Department)	<ul> <li>Ensure that the requirements identified in the initial environment examination are included in the bidding documents and contracts.</li> <li>Ensure the implementation and monitoring of safeguard requirements and publish theresults in the project's quarterly progress reports and semi-annual environmental reports.</li> <li>Supervise the PIC on mitigation measures and monitoring plan as specified in the EMP and ensure that the PIC submits its semi-annual environmental monitoring reports.</li> <li>Supervise PIC in the preparation of updated initial environment examination.</li> </ul>
Engineers of Technical and Maintenance Departments	<ul> <li>Assist the project engineer.</li> <li>Manage consultants' and consultants' progress and delivery of contract.</li> <li>Supervise contractor's work in the installation and commissioning of electrical and mechanical equipment.</li> </ul>

- 18. MOEI has established a dedicated full-time project management unit, which will administer all consulting contract on behalf of MOEI. It will be responsible for consultant recruitment, progress reports, withdrawal applications and funds and other required report for ADB and EDB. The project management will include the following positions: (i) head of project management unit, (ii) procurement expert, (iii) financial manager, and (iv) translator.
- 19. SPF will establish a dedicated project management unit which will administer the consulting contract on behalf of SPF. It will be responsible for consultant recruitment, progress reports, withdrawal applications and funds and other required report for ADB and EDB. The project management will include the following the following positions: (i) head of project management unit, (ii) procurement expert, (iii) financial manager, and (iv) translator.
- 20. The project organization structure and the PIU staffing are shown below:



ADB = Asian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, HPP = hydroelectric power plant.

### V. COSTS AND FINANCING

- 21. The project costs consist of: (i) two turnkey contracts for Toktogul HPP rehabilitation, (ii) one turnkey contract for EPP business process improvement, (iii) project implementation consulting services, (iv) EPP business process improvement consulting services, (v) power sector master plan consulting services, (vi) asset inventory and revaluation consulting services, (vii) external audit, (viii) individual consultants, (ix) taxes and duties, (x) recurrent cost, and (xi) financial charges.
- 22. The financing plan for the project is shown below. The government has requested a loan of \$65.5 million, and a grant of \$44.5 million from the Asian Development Fund. The Government has also requested a loan from Eurasian Development Bank (EDB) of \$100 million equivalent to be provided as joint cofinancing. The EDB loan will be partially administered by ADB. The Government will waive \$40.68 million of taxes and duties while EPP will provide \$1 million to fund the project recurrent cost. The EDB cofinancing will be used exclusively for Toktogul HPP powerhouse and hydraulic steel structure rehabilitation.

Financing Plan

	Amount	Share of Total
Source	(\$ million)	(%)
ADB - ADF Grant	44.50	17.68
ADB - ADF Loan	65.50	26.03
EDB - ACF Loan	100.00	39.73
Government of Kyrgyz Republic	40.68	16.16
EPP	1.00	0.40
Total	251.68	100.00

ADB = Asian Development Bank, ADF = Asian Development Fund, ACF = Anti Crises Fund, EDB = Eurasian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants.

Source: Asian Development Bank estimates.

# A. Detailed Cost Estimates by Expenditure Category (\$ million)

		(\$ million)		0/ - <b>( D</b>	
Item	Foreign Currency	Local Currency	Total	% of Base Cost	
A. Investment Costs <sup>a</sup>					
1 Toktogul Gates and HSS Turnkey Contract	12.00	-	12.00	6.00%	
2 Toktogul Powerhouse Turnkey Contract	127.00	-	127.00	63.50%	
3 EPP Business Process Improvement Turnkey Contract	3.50	-	3.50	1.75%	
4 Consulting Services			_	0.00%	
a. Power Sector Master Plan	1.75	-	1.75	0.87%	
b. EPP Business Process Improvement	1.50	_	1.50	0.75%	
c. Asset Inventory and Revaluation	2.00	_	2.00	1.00%	
d. Project Implementation Consultant	10.00	-	10.00	5.00%	
e. Individual Consultants <sup>f</sup>	0.18	_	0.18	0.09%	
f. External Auditing	0.40	_	0.40	0.20%	
B. Taxes and Duties <sup>e</sup>	-	40.68	40.68	20.34%	
Subtotal (A+B)	158.33	40.68	199.01	99.50%	
C. Recurrent Cost <sup>b</sup>	-	1.00	1.00	0.50%	
Total Base Costs (A+B+C)	158.33	41.68	200.01	100.00%	
D. Contingencies <sup>c</sup>					
Physical Contingency	26.82	-	26.82	13.41%	
Price Contingency	10.15	8.13	18.28	9.14%	
Subtotal (D)	36.97	8.13	45.10	22.55%	
E. Financial Charges During Implementation <sup>d</sup>	6.57	-	6.57	3.28%	
Total Project Cost (A + B + C + D)	201.87	49.81	251.68	125.83%	

EPP = Open Joint-Stock Company Electric Power Plants, HSS = hydraulic steel structures.

a. In mid-2014 prices.

b. Includes project management cost.

c. Physical contingencies computed at 19% for turnkey contracts and at 5% for all other cost categories. Price contingencies computed following the ADB's cost escalation factors, a purchasing parity assumption has been made to compute exchange rate adjustments.

d. Includes financial charges during construction on ADB loan at 1% per annum; and at 1% on EDB loan, and 0.5% up front commission on EDB loan.

e. Include taxes and duties to be financed or waived by the Government of the Kyrgyz Republic.

f. Individual consultants to support of the project implementation unit of EPP, MOEI and SPF.

Source: Asian Development Bank estimates.

# B. Allocation and Withdrawal of Loan/Grant Proceeds

	ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS										
	(Toktogul Rehabilitation Phase 2 Project)										
	CATEGOR	ADB FINANCING									
Number	ltem	Total Amount Allocated for ADB Financing (SDR)	Percentage and Basis for Withdrawal from the Loan Account								
1	Turnkey Contracts for Toktogul Rehabilitation	30,643,000	33.05 percent of total expenditure claimed*								
2	Turnkey Contract for Business Process Improvement	1,167,000	50.00 percent of total expenditure claimed*								
3	Financial charges during implementation	1,667,000	100 percent amount due								
4	Contingency	10,203,000									
	Total	43,680,000									

<sup>\*</sup> Exclusive of taxes and duties imposed within the territory of the Borrower.

	ALLOCATION AND WITHDRAWAL OF GRANT PROCEEDS										
	(Toktogul Rehabilitation Phase 2 Project)										
	CATEGORY										
Number	ltem		unt Allocated Financing(\$)	Percentage and Basis for Withdrawal from							
		Category	Subcategory	the Grant Account							
1	Turnkey Contracts for Toktogul Rehabilitation	18,340,000		13.20 percent of total expenditure claimed*							
2	Turnkey Contract for EPP Business Process Improvement	1,750,000		50.00 percent of total expenditure claimed*							
3	Consulting Services	16,540,000									
3A	Toktogul HPP rehabilitation, business process improvement and project management support (to EPP)		12,040,000	100 percent of total expenditure claimed*							
3B	Power sector master plan and project management support ( to MOEI)		2,100,000	100 percent of total expenditure claimed*							
3C	Asset inventory and revaluation and project management support (to SPF)		2,400,000	100 percent of total expenditure claimed*							
4	Contingency (for Categories 1, 2 and 3A)	7,870,000									
	Total	44,500,000									

<sup>\*</sup> Exclusive of taxes and duties imposed within the territory of the recipient.

# C. Detailed Cost Estimates by Financier

(\$ million)

		ΑI	)B		EDB	Laan	EDD		Carra		
Item	ADF	Loan	ADF	Grant	EDB Loan		EPP		Government		Total
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Cost
A. Investment Costs <sup>a</sup>											
1 Toktogul Gates and HSS TC	3.97	33.05%	1.58	13.20%	6.45	53.75%	-	-	-		12.00
2 Toktogul Powerhouse TC	41.98	33.05%	16.76	13.20%	68.26	53.75%	-	-	-	-	127.00
3 EPP Business Process Improvement TC	1.75	50.00%	1.75	50.00%	-	-	-	-	-	-	3.50
4 Consulting Services											
a. Power Sector Master Plan	-	-	1.75	100.00%	-	-	-	-	-	-	1.75
b. EPP Business Process Improvement	-	-	1.50	100.00%	-	-	-	-	-		1.50
c. Asset Inventory and Revaluation	-	-	2.00	100.00%	-	-	-	-	-		2.00
d. Project Implementation Consultant	-	-	10.00	100.00%	-	-	-	-	-	-	10.00
e. Individual Consultants	-	-	0.18	100.00%	-	-	-	-	-	. <u>-</u>	0.18
f. External Auditing	-	-	0.40	100.00%	-	-	-	-	-		0.40
B. Taxes and Duties <sup>e</sup>	-	-	-	-	-	-	-	-	40.68	100.00%	40.68
Subtotal (A+B)	47.70	23.97%	35.92	18.05%	74.71	37.54%	-	0.00%	40.68	20.44%	199.01
C. Recurrent Cost <sup>b</sup>	-	-	-	-	-	-	1.00	100.00%	-	-	1.00
Total Base Costs (A+B+C)	47.70	23.97%	35.92	18.05%	74.71	37.54%	1.00	100.00%	40.68	20.44%	200.01
D. Contingencies <sup>c</sup>											
Physical Contingency	9.00	33.56%	5.13	19.13%	12.69	47.32%	-	-	-	-	26.82
Price Contingency	6.30	34.46%	3.45	18.87%	8.53	46.66%	-	-	-	-	18.28
Subtotal (D)	15.30	33.92%	8.58	19.02%	21.22	47.05%	-	-		-	45.10
E. Financial Charges During Implementation <sup>c</sup>	2.50	38.05%			4.07	61.95%	-	-	-	-	6.57
Total (A + B + C + D + E)	65.50	26.03%	44.50	17.68%	100.00	39.73%	1.00	0.40%	40.68	16.16%	251.68
% of Total Project Cost	26	.03%	17.	68%	39.	73%	0.4	10%	16.	.16%	100.00%

ADB = Asian Development Bank, ADF = Asian Development Fund, EPP = Open Joint-Stock Company Electric Power Plants, HSS = hydraulic steel structures, TC = turnkey contract.

a. In mid-2014 prices.

b. Includes project management cost.

c. Physical contingencies computed at 19% for turnkey contracts and at 5% for all other cost categories. Price contingencies computed following the ADB's cost escalation factors, a purchasing parity assumption has been made to compute exchange rate adjustments.

d. Includes financial charges during construction on ADB loan at 1% per annum; and at 1% on EDB loan, and 0.5% up front commission on EDB loan.

e. Include taxes and duties to be financed or waived by the Government of the Kyrgyz Republic.

Source: Asian Development Bank estimates.

# D. Detailed Cost Estimates by Outputs/Components

(\$ million)

Item	Total Cost	Toktogul Rehabilitation			entory and uation	Power Sector	r Masterplan	Improvement EPP Business Processes	
	Total Cost	Amount	% of Cost category	Amount	% of Cost category	Amount	% of Cost category	Amount	% of Cost category
A. Investment Costs <sup>a</sup>									
1 Toktogul Gates and HSS TC	12.00	12.00	100.00%	-	-	-	-	-	-
2 Toktogul Powerhouse TC	127.00	127.00	100.00%	-	-	-	-	-	-
3 EPP Business Process Improvement TC	3.50	-	-	=	-	-	-	3.50	100.00%
4 Consulting Services									
a. Power Sector Master Plan	1.75	-	-	-	-	1.75	100.00%	-	-
b. EPP Business Process Improvement	1.50	-	-	-	-	-	-	1.50	100.00%
c. Asset Inventory and Revaluation	2.00	-	-	2.00	100.00%	-	-	-	-
d. Project Implementation Consultant	10.00	10.00	100.00%	-	-	-	-	-	-
e. Individual Consultants	0.18	0.14	77.78%	0.02	11.11%	0.02	11.11%	-	-
f. External Auditing	0.40	0.20	50.00%	0.05	12.50%	0.05	12.50%	0.10	25.00%
B. Taxes and Duties <sup>e</sup>	40.68	39.57	97.27%	0.25	0.61%	0.22	0.54%	0.64	1.57%
Subtotal (A+B)	199.01	188.91	94.92%	2.32	1.17%	2.04	1.03%	5.74	2.88%
C. Recurrent Cost <sup>b</sup>	1.00	1.00	100.00%	-	-	-	-	-	-
Total Base Costs (A+B+C)	200.01	189.91	94.95%	2.32	1.16%	2.04	1.02%	5.74	2.87%
D. Contingencies <sup>c</sup>									
Physical Contingency	26.82	26.43	98.55%	0.10	0.37%	0.09	0.34%	0.25	0.93%
Price Contingency	18.28	19.23	105.20%	0.08	0.44%	0.09	0.49%	0.38	2.08%
Subtotal (D)	45.10	45.66	101.24%	0.18	0.40%	0.18	0.40%	0.63	1.40%
E. Financial Charges During Implementation <sup>d</sup>	6.57	6.10	92.85%	-	-	-	-	0.16	2.44%
Total Project Cost (A + B + C + D + E)	251.68	241.67	96.02%	2.50	0.99%	2.22	0.88%	6.53	2.59%

EPP = Open Joint-Stock Company Electric Power Plants, HSS = hydraulic steel structures, TC = turnkey contract.

a. In mid-2014 prices.

b. Includes project management cost.

c. Physical contingencies computed at 19% for turnkey contracts and at 5% for all other cost categories. Price contingencies computed following the ADB's cost escalation factors, a purchasing parity assumption has been made to compute exchange rate adjustments.

d. Includes financial charges during construction on ADB loan at 1% per annum; and at 1% on EDB loan, and 0.5% up front commission on EDB loan.

e. Include taxes and duties to be financed or waived by the Government of the Kyrgyz Republic.

Source: Asian Development Bank estimates.

E. Detailed Cost Estimates by Year

(\$ million)

		(ψ 111	illiori)						
Item	Total Cost	Year 1 2015	Year 2 2016	Year 3 2017	Year 4 2018	Year 5 2019	Year 6 2020	Year 7 2021	Year 8 2022
A. Investment Costs <sup>a</sup>									
1 Toktogul Gates and HSS TC	12.00	-	1.80	8.40	1.80	-	-	-	-
2 Toktogul Powerhouse TC	127.00	-	-	12.70	38.10	25.40	19.05	25.40	6.35
3 EPP Business Process Improvement TC	3.50	-	-	1.40	1.05	0.70	0.35	-	-
4 Consulting Services									
a. Power Sector Master Plan	1.75	-	0.70	0.70	0.35	-	-	-	-
b. EPP Business Process Improvement	1.50	0.15	0.24	0.32	0.32	0.27	0.12	0.08	-
c. Asset Inventory and Revaluation	2.00	0.20	1.20	0.60	-	-	-	-	-
d. Project Implementation Consultant	10.00	1.00	2.00	1.50	1.50	1.50	0.90	0.80	0.80
e. Individual Consultants	0.18	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02
f. External Auditing	0.40	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
B. Taxes and Duties <sup>e</sup>	40.68	0.18	0.91	6.40	11.41	7.33	5.45	7.13	1.88
Subtotal (A+B)	199.01	1.60	6.92	32.09	54.61	35.27	25.95	33.48	9.10
C. Recurrent Cost <sup>b</sup>	1.00	0.07	0.14	0.14	0.14	0.14	0.14	0.14	0.09
Total Base Costs (A+B+C)	200.01	1.67	7.06	32.23	54.75	35.41	26.09	33.62	9.19
D. Contingencies <sup>c</sup>									
Physical Contingency	26.82	0.09	0.52	4.14	7.60	4.84	3.65	4.76	1.22
Price Contingency	18.28	0.03	0.24	1.71	4.75	3.61	3.09	4.51	1.31
Subtotal (D)	45.10	0.12	0.76	5.85	12.35	8.45	6.74	9.27	2.53
E. Financial Charges During Implementation <sup>c</sup>	6.57	0.50	0.01	0.15	0.51	0.89	1.35	1.43	1.62
Total (A + B + C + D + E)	251.68	2.29	7.83	38.23	67.61	44.75	34.18	44.32	13.34
% Total Project Cost	100.00%	0.91%	3.11%	15.19%	26.86%	17.78%	13.58%	17.61%	5.30%

EPP = Open Joint-Stock Company Electric Power Plants, HSS = hydraulic steel structures, TC = turnkey contract.

a. In mid-2014 prices.

b. Includes project management cost.

c. Physical contingencies computed at 19% for turnkey contracts and at 5% for all other cost categories. Price contingencies computed following the ADB's cost escalation factors, a purchasing parity assumption has been made to compute exchange rate adjustments.

d. Includes financial charges during construction on ADB loan at 1% per annum; and at 1% on EDB loan, and 0.5% up front commission on EDB loan.

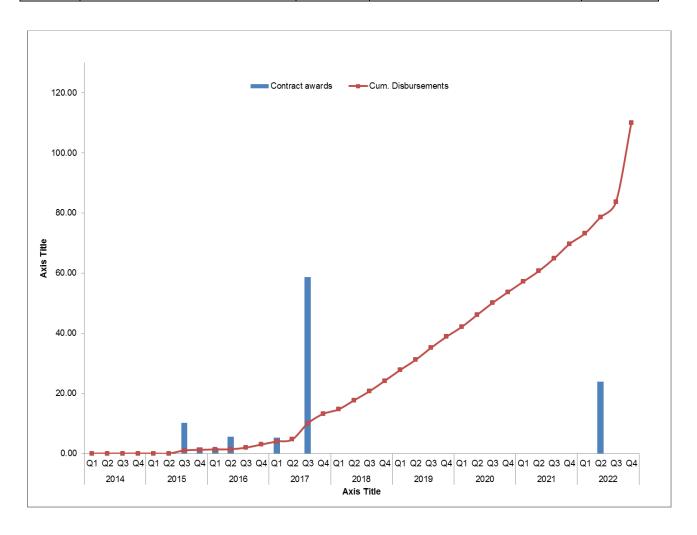
e. Include taxes and duties to be financed or waived by the Government of the Kyrgyz Republic.

Source: Asian Development Bank estimates.

# F. Contract and Disbursement S-curve

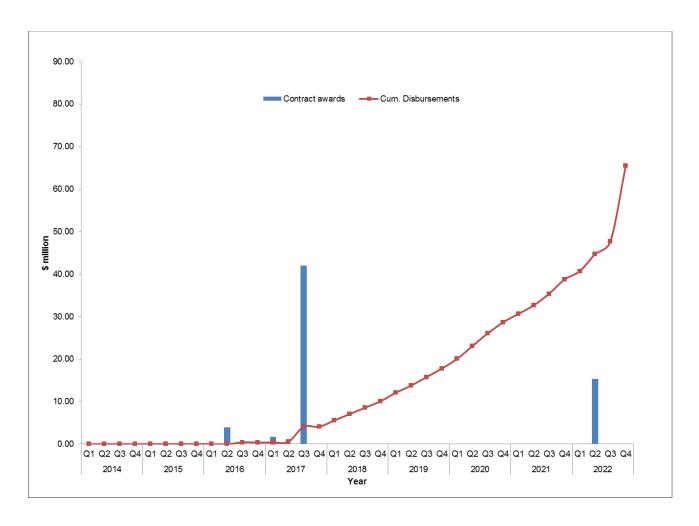
# 23. Baseline projection- entire ADB financing

		Contract A	wards (in	USD mill	ion)	Disbursements (in USD million)					
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2015	0.00	0.00	10.18	2.00	12.18	0.00	0.00	1.00	0.20	1.20	
2016	1.90	5.55	0.00	0.00	7.45	0.15	0.44	0.15	1.04	1.78	
2017	5.25	0.00	58.74	0.00	63.99	1.00	0.68	5.30	1.69	8.67	
2018	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.50	12.50	
2019	0.00	0.00	0.00	0.00	0.00	3.60	3.37	4.00	3.69	14.66	
2020	0.00	0.00	0.00	0.00	0.00	3.30	4.00	4.00	3.58	14.88	
2021	0.00	0.00	0.00	0.00	0.00	3.50	3.50	4.23	4.82	16.05	
2022	0.00	23.88	0.00	0.00	23.88	3.50	5.38	5.00	26.38	40.26	
		Total	Contract A	wards	107.50		То	tal Disbu	rsements	110.00	



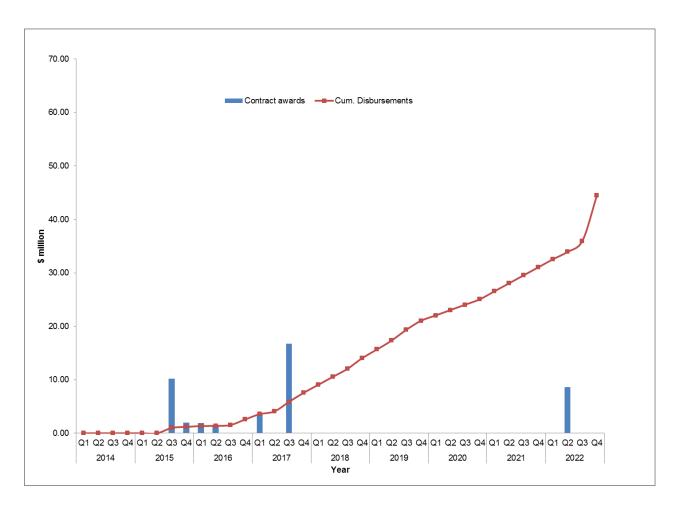
# 24. Baseline projections- ADB ADF Loan

	(	Contract Aw	ards (in U	JSD millio	on)	Disbursements (in USD million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016	0.00	3.97	0.00	0.00	3.97	0.00	0.00	0.40	0.00	0.40
2017	1.75	0.00	41.98	0.00	43.73	0.00	0.18	3.50	0.00	3.68
2018	0.00	0.00	0.00	0.00	0.00	1.50	1.50	1.50	1.50	6.00
2019	0.00	0.00	0.00	0.00	0.00	2.00	1.69	2.00	2.00	7.69
2020	0.00	0.00	0.00	0.00	0.00	2.30	3.00	3.00	2.58	10.88
2021	0.00	0.00	0.00	0.00	0.00	2.00	2.00	2.73	3.32	10.05
2022	0.00	15.30	0.00	0.00	15.30	2.00	4.00	3.00	17.80	26.80
		Total	Contract	Awards	63.00		T	otal Disb	ursements	65.50



# 25. Baseline projections- ADB ADF Grant

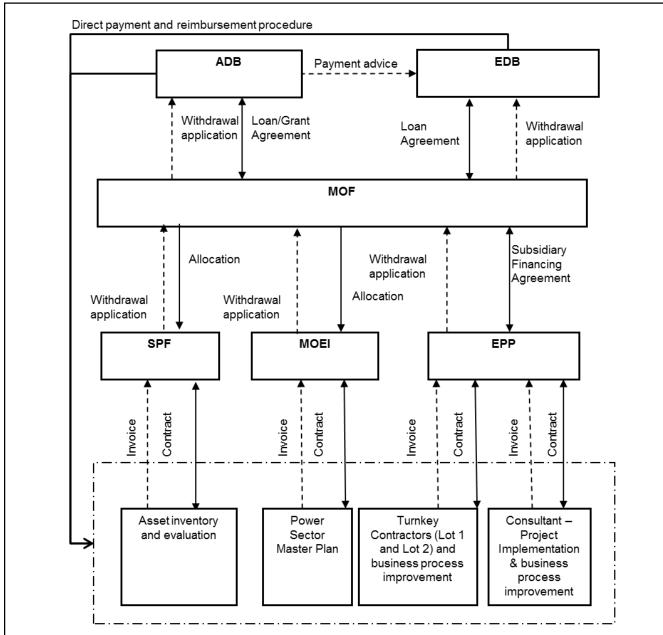
	(	Contract	Awards (in U	JSD millio	on)	Disbursements (in USD million)			on)	
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	10.18	2.00	12.18	0.00	0.00	1.00	0.20	1.20
2016	1.90	1.58	0.00	0.00	3.48	0.15	0.04	0.15	1.04	1.38
2017	3.50	0.00	16.76	0.00	20.26	1.00	0.50	1.80	1.69	4.99
2018	0.00	0.00	0.00	0.00	0.00	1.50	1.50	1.50	2.00	6.50
2019	0.00	0.00	0.00	0.00	0.00	1.60	1.68	2.00	1.69	6.97
2020	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	4.00
2021	0.00	0.00	0.00	0.00	0.00	1.50	1.50	1.50	1.50	6.00
2022	0.00	8.58	0.00	0.00	8.58	1.50	1.38	2.00	8.58	13.46
	Total Contract Awards				44.50		Tot	al Disbur	sements	44.50



# 26. Baseline projections- EDB loan

		Contract A	on)	Disbursements (in USD million)						
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016	0.00	6.45	0.00	0.00	6.45	0.00	0.00	0.60	0.00	0.60
2017	0.00	0.00	68.26	0.00	68.26	0.00	0.00	6.50	0.00	6.50
2018	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	12.00
2019	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	12.00
2020	0.00	0.00	0.00	0.00	0.00	4.00	3.00	3.00	3.00	13.00
2021	0.00	0.00	0.00	0.00	0.00	3.00	4.00	4.00	4.00	15.00
2022	0.00	21.22	0.00	0.00	21.22	5.61	4.00	6.00	25.29	40.90
	Total Contract Awards			95.93		То	tal Disbu	ırsements	100.00	

# G. Fund Flow Diagram



ADB = Asian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, MOEI = Ministry of Energy and Industry, MOF = Ministry of Finance, SPF = State Property Fund.

### VI. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

- 27. ADB updated a Financial Management Assessment (FMA) for EPP and MOEI conducted for the Power Sector Rehabilitation Project in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects<sup>8</sup> and the publication Financial Due Diligence: A Methodology Note.<sup>9</sup> The financial management arrangements of the State Property Fund (SPF) and the Ministry of Energy and Industry (MOEI) that are EAs for one component each have also been assessed. The FMA included a review of the accounting and reporting system, internal and external auditing arrangements, fund disbursement procedures, and information systems. The primary instrument used for the assessment was ADB's financial management assessment questionnaire, together with interviews with the EA staff.
- 28. The overall project financial management risk is assessed to be Moderate, due to the strong project financial management arrangements in place in EPP, which is the principal executing agency accounting for about 97% of the project. The financial management risk of SPF and MOEI is considered negligible. EPP has already been implementing the Power Sector Rehabilitation Project, and the audited project financial statements provide a clean opinion. The Management Letter has also not revealed any significant internal control weaknesses. More details of the risk assessment and mitigation measures are presented in the following paragraphs.

### a) Inherent Risk

29. Inherent Risk is the susceptibility of the project financial management system to factors arising from the environment in which it operates, such as country rules and regulations and entity working environment (assuming absence of any counter checks or internal controls).

Risk type	Risk Asst <sup>10</sup>	Risk Description	Mitigation Measures
1. Country- Specific Risks	H	Low quality of planning may impact budget execution.	The Government has approved a midterm action plan in October 2012 for reforming the public financial management system. The government has been making substantial efforts with external support to introduce management information systems and automated tax and custom operations, modernize treasury operations, and decentralize financial management functions to local governments. Improving political and economic stability is expected to contribute to improved budget execution.

<sup>&</sup>lt;sup>8</sup> Financial Management and Analysis of Projects. ADB. 2005.

<sup>&</sup>lt;sup>9</sup> Financial Due Diligence A Methodology Note. ADB. 2009.

<sup>&</sup>lt;sup>10</sup> Risk Assessment: H = High, S = Substantial, M = Moderate, N = Negligible or Low.

Risk type	Risk Asst <sup>10</sup>	Risk Description	Mitigation Measures
	S	Lack of public support to raise tariffs may undermine EPP's proper operation and financial sustainability	A medium term tariff strategy has been developed by MOEI, under which heating tariff has already been raised in July 2014, with plans to raise consumer electricity tariff every year in stages during the period 2014 to 2017. Legislation has recently been enacted to establish an independent power sector regulator that will determine cost-reflective tariff. ADB is supporting the conduct of a Public Communications Plan to explain the rationale for tariff increases to the general public of the country.
2. Entity- specific risks	Н	The sector level revenue distribution mechanism remains arbitrary and non-transparent. There is unpredictability about the distribution of revenue between the different sector companies.	The KESC is being established with ADB support, which will develop a transparent and fair revenue distribution mechanism.  The recently approved law will establish an independent electricity regulator that is expected to advise cost-reflective tariff. This exercise is being supported by USAID. Through the medium term tariff strategy, the government has signalled its intention to progressively increase tariffs from 2014 to 2017.
	S	Lack of internal control and weak internal audit function. The internal audit function reports to the Managing Director, and is inadequately staffed.	Internal audit function was recently imposed on the energy sector companies by an MOEI resolution. However, the nature of audit function which is supposed to report to BoD, has been placed under the Managing Director, which weakens its independence. EPP Management intends to recruit and fully staff the internal audit function, and ensure it is actively implemented.
	M	Inadequate salaries, aging staff and staff turnover.	A training centre under NESG is educating new generation of specialists. Specialists are sufficiently educated at the relevant university located in the cite area.

Risk type	Risk Asst <sup>10</sup>	Risk Description	Mitigation Measures
3. Project specific risks	M	PIU may not have the capacity to manage the project fund flows and to ensure disbursement arrangements.	EPP will recruit an individual consultant to assist in project financial management.  Experiences gained during Phase I and further training in ADB procedures will help to mitigate this risk.  To ensure timely cash flow and reduce administrative burden, the disbursement will largely adopt direct payment and commitment procedures. Reimbursement procedures will be used for small amounts only.
	M	Low salaries and staff turnover in the PIU.	The PMU will be staffed both by EPP staff and consultants in the initial years to improve project implementation.
Overall Assessment of Inherent Risk	S		

# b) Control Risk

30. Control Risk is the risk that the project's accounting and internal control framework are inadequate to ensure project funds are used economically and efficiently and for the purpose intended, and that the use of funds is properly reported.

Risk type	isk type Risk Descri		Risk Mitigation Measures
Control Risk			
1. Implementing Entity	M	Project financial management policies and procedures have been established, but experience still needs to be gained.	Support will be provided to the PIU to gain sound financial management experience. Project implementation consultants will be provided to strengthen the PIU capacity.

-

 $<sup>^{11}</sup>$  Risk Assessment: H = High, S = Substantial, M = Moderate, N = Negligible or Low.

Risk type	Risk Asst <sup>11</sup>	Risk Description	Risk Mitigation Measures
2. Funds Flow	M	Challenges may be encountered in managing disbursements, due to weak cash flows. Particularly MOEI and SPF may be unable to pre-finance consultant expenditure, as the minimum value per withdrawal application is \$100,000. This may cause delays in payments to consultants.	The project will apply direct payment, commitment, and reimbursement procedures for the Contracts. MOEI and SPF have confirmed that they would make suitable arrangements for such pre-financing of consultant payments, and obtain subsequent reimbursement from ADB.
3. Staffing	M	The work load in the PIU is higher than in the relevant departments of EPP. However, salaries remain at the same level. Staff turnover and a lack of financial management skills.	The PMU in EPP will be supported with a project implementation consultant as well as individual consultants in the initial years. MOE and SPF will also be supported through individual consultants for effective project implementation.
		Accounting staff have limited understanding of ADB requirements.	Provide regular training on ADB's procurement and disbursement processes.
4. Internal Audit	S	There was no effective internal audit function for the previous phase.	EPP has introduced an internal audit function. Its effectiveness will be monitored during implementation.
5. External Audit	M	Capacity of external auditors in the country is weak as regards IFRS compliance assessment.	Project financial auditing will be supported through loan funds, enabling recruitment of good quality external auditors.
6. Reporting and Monitoring	M	Financial reports are produced but are often based on unreconciled accounts, and are provided late.	Timely and reliable reporting provided to all stakeholders: implementing agency, user agencies, donors, and program and project management.
			PIU to prepare and submit to the management of ADB quarterly and annual progress reports on project implementation and operation.
			Monitor compliance with loan covenants, including submission of audited project financial statements.

Risk type	Risk Asst <sup>11</sup>	Risk Description	Risk Mitigation Measures
7. Information Systems	M	The 1C enterprise software package for accounting and reporting is lacking some sub-accounts and out-of-balance accounts for the project purposes. It does not assure compatibility and timeliness from all branches when preparing financial reports.	A separate accounting system for the PIU is in place with EXCEL.  The PIU is in the process of obtaining appropriate accounting software.
Overall Control Risk	М		

- 31. The project design has taken into consideration the weaknesses identified in country and institutional level arrangements. The financial management in EPP is supported through project implementation consultants for the first four years, besides the expansion and strengthening of a project implementation unit that is already managing the first project<sup>12</sup>. To mitigate a weak liquidity position, direct payment procedures will predominate. Considering that the CPS has rated the PFM risk as high, imprest accounts will not be established and reimbursement procedure for eligible expenditures will apply with full supporting documentation.
- 32. To address a long-standing weakness in the energy sector (covering all 6 electricity companies and the Bishkek District Heating Company), the project includes a component for inventory and revaluation of all sector assets. This is expected to significantly strengthen the quality of control over assets across the sector. It is also envisaged that external auditors will be recruited with loan funds, to ensure higher standards of external audit. Further, a business process improvement component is included in the project for EPP, whereby the business processes will be updated and streamlined, followed by the procurement, installation and implementation of a comprehensive enterprise resource planning system. These steps are expected to substantially address financial management and governance issues in EPP in a systematic manner.
- 33. Recently in 2014, the MOEI has mandated the establishment of an internal audit department in EPP, and EPP is in the process of recruiting and staffing the department. The implementation of internal audit is expected to significantly strengthen internal control within EPP, and will be monitored during project implementation.
- 34. For the ongoing project (Phase 1), the PIU has been using Excel-based reporting to generate project accounts. As the second, and much large, phase is now proposed, EPP confirmed that it would procure an off-the-shelf software for the PIU from its own resources. The software will integrate fully with the principal 1C software in use by EPP.

Loan 2869-KGZ and Grant 0294-KGZ - Power Sector Rehabilitation Project, for initial rehabilitation of the Toktogul Hydropower Project.

- 35. Apart from the larger institutional reform efforts proposed above, the following action plan is proposed for EPP:
  - a) Provide regular training in ADB disbursement procedures.
  - b) Recruit an individual consultant for project financial accounting.
  - c) Obtain accounting software for project accounting.
  - d) Recruit and staff the internal audit department.
  - e) The internal audit reports will be regularly reviewed by the Board of Directors, and action taken to address the findings.

#### B. Disbursement

- 36. The Loan and Grant proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),<sup>13</sup> and detailed arrangements agreed upon between the government and ADB.
- 37. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),<sup>14</sup> ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS.
- 38. Submission of Withdrawal Applications
  - a) For the contract packages that are being financed by ADB loan and grant, EPP will prepare and submit through MOF to ADB, one original of WA for each fund source and copies of required supporting documents.
  - b) For those packages that are financed by the ADB loan and grant as well as EDB loan, EPP will prepare and submit through MOF; (i) to ADB, one original of WA for each fund source for ADB loan/grant and EDB loan and copies of required supporting documents; (ii) to EDB, one original WA for the EDB loan and copies of required supporting documents. ADB will review each WAs and advise EDB to make payments required in such WAs subject to approval by EDB.
  - c) For the MOEI and SPF components that are grant-financed, withdrawal applications will be submitted to ADB through the MOF by MOEI and SPF respectively.
- 39. Before the submission of the first withdrawal application, the Borrower / Recipient should submit to ADB sufficient evidence of the authority of the person(s) who will sign the Was of the ADB loan/grant and EDB loan on its behalf, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is \$100,000, unless otherwise approved by ADB. ADB reserves the right to decline acceptance of claims below \$100,000. The Borrower is to consolidate claims to meet this limit for reimbursement. Withdrawal applications and supporting documents will demonstrate, among other things that the goods, and/or services are eligible for ADB / EDB financing.

# C. Accounting

40. The EPP will maintain separate books and records by funding source for all expenditures incurred on the project following International Financial Reporting Standards. The government will cause MOEI and SPF to maintain, separate books and records by funding

Available at: http://www.adb.org/Documents/Handbooks/Loan\_Disbursement/loan-disbursement-final.pdf

<sup>&</sup>lt;sup>14</sup> Available at: http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf

source for all expenditures incurred on their respective portions of the project following the government's laws and regulations.

# D. Auditing

- 41. The ADB grant proceeds will be utilized by EPP to recruit an external independent auditor following ADB's consultant recruitment guidelines, who shall carry out the audit of the project financial statements maintained by all 3 entities. MOEI and SPF will support EPP in preparation and conducting a selection of the auditor. Representatives of MOEI and SPF may be included in the bid evaluation committee of EPP. The EPP will cause the detailed project financial statements for its project component to be audited in accordance with International Standards on Auditing, by the independent auditor. The audited project financial statements together with the auditors' opinion will be submitted in the English language to ADB (and EDB in the Russian language) within six months of the end of the fiscal year by the EPP. MOEI and SPF will cause the detailed project financial statements for their project components to be audited in accordance with International Standards on Auditing, by an the same independent auditor, and submit to ADB within 6 months of the end of each financial year (in the English language).
- 42. The annual audit report for the project financial statements 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; and (ii) whether loan and grant proceeds were used only for the purposes of the project.
- 43. In addition, EPP will get its entity financial statements audited annually<sup>15</sup>, and submit to ADB within one month after their approval by the relevant authority, the auditors' opinion and the audited entity financial statements (in the English language). The auditors' opinion (in the English language) on the level of compliance with the financial covenants in the loan agreement shall also be submitted.
- 44. 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.
- 45. The government, EPP, MOEI and SPF have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.<sup>16</sup> ADB reserves the right to require a change in the auditor (in a

<sup>16</sup> ADB Policy on delayed submission of audited project financial statements:

- When audited project financial statements are <u>not received by the due date</u>, 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 <u>have not been received within 6 months after the due date</u>, 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 <u>have not been received within 12 months after the due date</u>, ADB may suspend the loan.

<sup>&</sup>lt;sup>15</sup> EPP will finance this audit from its own resources.

manner consistent with the constitution of the borrower), 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 and EDB's financing are used in accordance with ADB's policies and procedures.

46. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by *ADB's Public Communications Policy* (2011)<sup>17</sup>. After review, ADB will disclose the project financial statements 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.

<sup>17</sup> Available from http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications

### VII. PROCUREMENT AND CONSULTING SERVICES

#### A. Procurement Capacity Assessment

47. A procurement capacity assessment found that the country's procurement system is weak but improving. Public procurement by procurement entities, including those by joint-stock companies such as EPP, is governed by the Public Procurement Law (PPL; 24 May 2004 with later amendments No. 172 of 28 July 2008, No. 236 of 20 July 2009, No. 235 of 8 July 2011, No. 84 of 30 May 2013 and No. 147 of 17 July 2013). There are no specific regulations for public procurement in the utilities sector. Although the public procurement legislative framework provides a theoretically sound environment for competitive and transparent procurement, it is not strictly enforced. In addition, the capacities of the procurement entities and the supervising authorized state body on public procurement are limited. It is critical for the project implementation consultant to be deeply engaged in the procurement process to ensure that the procurement procedure conforms to ADB's policy and guidelines. A summary of the assessment on the country's procurement system and EPP's procurement capacity is shown below.

# Assessment of the National Environment

Business Environment and Enterprise Performance Survey (BEEPS 2013) reports that various aspect of business climate in Kyrgyz Republic has improved since the last survey in 2008, however corruption still remain as the second worst obstacles with political stability as the most severe obstacles. The country also ranked 150 out of 175 countries on the 2013 Transparency International Corruption Perception Index. Nevertheless, the Kyrgyz Republic is one of the leading countries in Central Asia to introduce public procurement reform. It enacted the first PPL in April 1997. Many of the recommendation on organizational reforms made by the World Bank's Country Procurement Assessment Report (CPAR; 2002) were adopted, but implementation and enforcement are weak. On 20 July 2010, the "Decree on Transparency Initiative for Fuel and Energy Sector of the Kyrgyz Republic" was issued by the President. The objective is to improve governance in all aspects of the energy sector. The decree calls for a Monitoring Council to be established under the MOEI to monitor performances of the energy utilities. This includes enforcement of use of open competitive tenders for export/import of electricity and procurement of fuels, and quarterly publication of performance reports.

### General Agency Resource Assessment

EPP has an existing PIU experience with donor-funded and ADB projects. It is staffed with three engineers plus a Project Director. One of the engineers is in charge of the procurement process. EPP have agreed that they will further expand the capability of the PIU and appoint additional qualified personnel for (i) project accounting requirements and (ii) for safeguard monitoring. Considering the complexity of further Toktogul rehabilitation, ADB will fund the recruitment of three national experts (procurement, finance and safeguard) for the first 3 years of implementation to ensure that existing staff capacity is strengthen. An international project implementation consultant (a firm) will be recruited to assist the PIU with project implementation and to ensure that procurement activities adhere to ADB's guidelines. It is also recommended that appropriate training in ADB guidelines and procedures be provided by ADB.

#### Agency Procurement Processes

PPL calls for the procuring entity to assign a department to handle the tender and to establish a Tender Commission for each tender. There must be at least five members in the committee and the number of members must be odd. The "Provision on Formation of Tender Committees for Goods, Works and Services Procurement under State Investments Program Projects (2007) further elaborates that the Tender Commission should comprise a procurement specialist, technical expert, financial specialist, and a representative from the MOF. Its functions are to (i) open bids and record bid opening, (ii) evaluate bids, (iii) recommend winner of the bid to the donor, and (iv) prepare minutes of Tender Commission meetings and ensure that the minutes

Process Control and Oversight	The Tender Commission is expected to provide control and oversight. All the procurement process will be assisted and monitored by the project implementation consultant to ensure compliance with ADB guidelines and procedures. This will assure the transparency and accountability for all the procurement activities.
Records Keeping and Audit	Project management records including procurement are maintained in the PIU. However, to improve record-keeping practices, EPP will develop enterprise resource planning (ERP). The project financial statement shall be an integral component of the ERP.  External controls are exercised by the Chamber of Accounts, but the audits are ineffective since the staffs are not properly trained in procurement processes. EPP has assured ADB that a separate project financial statement will be established and that it will be audited annually by an external auditor acceptable to ADB.
Summary Assessment and Recommendations	The country procurement system and the EPP's capacity on procurement are rated as weak but improving. The current procurement practice is considered to be insufficient from the standpoint of transparency and accountability. It is recommended that (i) appropriate training in ADB guidelines and procedures be provided by ADB resources, and (ii) the PIC closely monitor the procurement progress and undertake timely and adequate actions as necessary to ensure speedy and efficient procurement in a transparent and competitive manner.

### B. Contracting and Retroactive Financing

- 48. **Advance contracting**. Advance contracting will be undertaken in conformity with ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time). The issuance of invitations to bid under advance contracting will be subject to ADB approval. The Borrower, MOEI, SPF and EPP have been advised that approval of advance contracting does not commit ADB to finance the project. Advance contracting is expected for the recruitment of consultants. Advertisement, shortlisting, issuance of requests for proposals, technical and financial evaluations may take place prior to effectiveness of the loan/grant agreements.
- 49. **Retroactive financing.** Retroactive financing is not expected.

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

- 50. All procurement of goods and works will be undertaken in accordance with *ADB*'s *Procurement Guidelines* (2013, as amended from time to time).
- 51. An 18-month procurement plan indicating threshold and review procedures, good, works and consulting service contract packages is in Section D.
- 52. All consultant will be recruited according to ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time). Quality-and cost based selection method (QCBS) method will be the default method for recruiting consulting firms with a standard quality cost ratio of 90:10 due to the complexity nature of the rehabilitation work and technology adopted in the project, thus the importance of quality. External auditing consultants will be selected using consultants' qualifications selection (CQS). Individual consultant will be selected individual

-

<sup>&</sup>lt;sup>18</sup>Available at: http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf

consultants selection (ICS). The terms of reference for all consulting services are detailed in Section E.

### D. Procurement Plan

a) Basic Data

Project Name: Toktogul Rehabilitation Phase 2 F	Project
Project Number: 46348	Approval Number:
Country: Kyrgyz Republic	Executing Agency: Open Joint-Stock Company Electric
	Power Plants, Ministry of Energy and Industry, State Property
	Fund
Project Financing Amount: \$210 million	Implementing Agency: -
ADB Financing: \$110 million	
EDB Financing: \$100 million	
Date of First Procurement Plan: November	Date of this Procurement Plan: 17 Sept 2014
2014	

# b) Methods, Thresholds, Review and 18-Month Procurement Plan

# 1. Procurement and Consulting Methods and Thresholds

53. Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

p	none or goods								
Procurement of Goods and Works									
Method				Threshold			Comments		
International Works	Competitive	Bidding	(ICB)	for	Including \$1,000,000	and	above	Prior review required	
International (	Competitive Bi	dding for	Goods		Including and	d above \$	500,000	Prior review required	
Shopping for Works			Below \$100,000						
			Below \$100,0	000					

Consulting Services							
Method Comments							
Quality and Cost Based Selection (QCBS)	Prior review required						
Consultants' Qualifications Selection	Prior review required						
Individual Consultant Selection	Prior review required						

### 2. Goods and Works Contracts Estimated to Cost \$1 Million or More

54. 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	Comments
1	Gate and hydraulic steel structure rehabilitation	\$12 million	ICB	Prior	1S1E	Q1 2016	Pre-qualification of Bidders: N Bidding Document: Plant Comments: To be financed by ADB and EDB
2	Toktogul powerhouse rehabilitation	\$127 million	ICB	Prior	2S	Q1 2015	Pre-qualification of Bidders: Y Bidding Document:

							Plant Comments: To be financed by ADB and EDB
3	EPP business process improvement and ERP system	\$3.5 million	ICB	Prior	1S1E	Q2 2016	Pre-qualification of Bidders: N Bidding Document: Plant Comments: To be financed by ADB

<sup>1</sup>S1E = single stage, one envelope, 2S = 2 stage, ICB = international competitive bidding, EDB = Eurasian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, ERP = enterprise resource planning.

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

55. 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	Type of Proposal	Comments
1	Project implementation consultant	\$10.0 million	QCBS	Prior	Q4 2014	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: To be financed by ADB.
2.	Asset Inventory and Revaluation	\$2.0 million	QCBS	Prior	Q4 2014	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: To be financed by ADB.
3.	EPP Business Process Improvement Consultant	\$1.5 million	QCBS	Prior	Q4 2014	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: To be financed by ADB.
4.	Power Sector Master Plan	\$1.75 million	QCBS	Prior	Q4 2015	FTP	Assignment: International Quality-Cost Ratio: 90:10 Comments: To be financed by ADB.
5.	External Audit	\$0.4 million	CQS	Prior	Q2 2015	STP	Assignment: International/nation al to cover audit of projct financial statements for EPP, MOEI and SPF. Comments: To be financed by ADB.

ADB = Asian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, FTP =full technical proposal, MOEI = Ministry of Energy and Industry, SPF = State Property Fund, QCBS = quality- and cost-based selection, CQS = consultants' qualifications selection, STP = simplified technical proposal.

- 4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)
- 56. 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	Comments			

Consultin	g Services							
Package Number	General Description	Estimated Value	Number of Contracts	Recruitment Method	Review (Prior / Post)	Advertisement Date	Type of Proposal	Comments
1	PIU Support Consultant (EPP)	\$96,000	2	ICS	Prior	Q4 2014		Assignment: National Comments: To be financed by ADB
2	Health, Safety and Environment expert (EPP)	\$48,000	1	ICS	Prior	Q1 2015		Assignment: National Comments: To be financed by ADB
3	PIU Support Consultant MOEI)	\$18,000	1	ICS	Prior	Q4 2014		Assignment: National Comments: To be financed by ADB
4	PIU Support Consultant (SPF)	\$18,000	1	ICS	Prior	Q4 2014		Assignment: National Comments: To be financed by ADB.

ADB = Asian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, ICS = individual consultants selection, MOEI = Ministry of Energy and Industry, PIU = project implementation unit, PF = State Property Fund.

# c) Indicative List of Packages Required Under the Project

57. 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 <sup>5</sup>	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review (Prior / Post)	Bidding Procedure	Comments

Consulting Services							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Review (Prior / Post)	Type of Proposal	Comments

# d) List of Awarded and On-going, and Completed Contracts

58. The following tables list the awarded and on-going contracts, and completed contracts.

# 1. Awarded and Ongoing Contracts

Package Number	General Description	Estimated Value	Contract Value	Procurement Method	Advertise ment Date (quarter/ year)	Date of ADB Approval of Contract Award	Comments

Package Number	General Description	Estimated Value	Contract Value	Recruitment Method	Advertise ment Date (quarter/ year)	Date of ADB Approval of Contract Award	Comments

## 2. Completed Contracts

Goods and W	Goods and Works								
Package Number	General Description	Estimated Value	Contract Value	Procurement Method	Advertisement Date (quarter/ year)	Date of ADB Approval of Contract Award	Date of Completion	Comments	

Consulting Se	Consulting Services								
Package Number	General Description	Estimated Value	Contract Value	Recruitment Method	Advertisement Date (quarter/ year)	Date of ADB Approval of Contract Award	Date of Completion	Comments	

# 5. Review of Contract Modifications

59. ADB will review contract modifications in accordance with the procedures set forth in the financing agreement between the Beneficiary and ADB

34

#### E. Consultant's Terms of Reference

[Position-based Terms of Reference to be finalized at recruitment stage]

#### A. Project Implementation Consultant

60. The Kyrgyz Republic power sector is characterised by aging assets, high commercial losses, below-cost tariffs, and poor performance of sector companies. The proposed Toktogul Rehabilitation Phase 2 Project aims to further rehabilitate Toktogul HPP by replacing two turbine-generator units and associated auxiliary systems. The executing agency is the EPP, a state-owned enterprise.

61. Toktogul HPP is the largest and most important power plant in the Kyrgyz Republic, with installed capacity of 1,200 megawatts. Producing 50% of the average country electricity output, the power plant plays a critical role as a domestic power source and as a power exporter and provider of frequency regulator services to the Central Asian power system. Toktogul HPP has been in services since 1975 with no signification rehabilitation work having been undertaken. EPP wishes to implement the complete rehabilitation of Toktogul HPP. Complete rehabilitation will be carried out over 3 phases. Main data of Toktogul HPP is as stated below:

Number of installed units: 4 x 300 MW Year of Commissioning 1975 Rated head 140 m Range of operation / head 110 - 180 m 4 x 240 m<sup>3</sup>/sec Rated discharge Total spilling capacity (total) 3500 m<sup>3</sup>/sec Dam type Concrete gravity Dam Height 215 m Dam Crest Length 292 m 14 x 10<sup>9</sup> m<sup>3</sup> Reservoir Life Storage Volume 284.3 km<sup>2</sup> Reservoir Surface

- 62. Ongoing Phase 1 covers rehabilitation of priority Toktogul HPP secondary mechanical and electrical equipment (500kV XLPE cables, circuit breakers, step up transformers and other auxiliary equipment) and inspections of gates and hydraulic steel structures. <sup>19</sup> Procurement of Phase 1 is delayed by 1 year due to insufficient compliant bids. Expected contract award is by June 2015.
- 63. Phase 2 will consist of 2 turnkey contracts. Contract 1 covers refurbishment of gates and hydraulic steel structures as recommended by Phase 1 and Contract 2 covers replacements of two turbine-generator units (unit 2 and unit 4) and associated auxiliary systems and inspection. The final Phase 3 will cover the remaining two turbine-generator (unit 1 and unit 3) units and civil structure repairs. Phase 2 is jointly financed by Asian Development Bank and Eurasian Development Bank.
- 64. Under ADB's project preparatory technical assistance. ADB recruited Fichtner GmbH (Germany) consulting firm to conduct due diligence and to prepare draft bidding documents (for

<sup>19</sup> ADB approved Power Sector Rehabilitation Project (Phase 1) on June 2012. http://www.adb.org/projects/documents/power-sector-rehabilitation-project-rrp

Contract 1 only) for the proposed phase 2 project. The project is expected to be considered by ADB Board in November 2014.

65. The objective of the executing agency, EPP is to improve the technical and operational performance of the Toktogul HPP, and intends to contract the rehabilitation of the Toktogul HPP on an Engineering Procurement and Construction (EPC) scheme. The consultant will work with the Project Implementation Unit of EPP. The assignment will cover project due diligence for Phase 3 and project implementation for Phase 2. Total implementation period is between 6-7 years.

# **Objective and Scope of Work**

- 66. The major assignments are:
  - a) **Phase 3**: Conduct due diligence for Phase 3 project.
  - b) Phase 2: Successful implementation of the two turnkey contracts through provision of technical assistance to the PIU of EPP for the procurement of contractors and implementation of works. In particular the firm will be responsible for supporting PIU in project administration, design and engineering, services, contracting, management control, procurement and expediting of equipment, materials control, inspection of equipment prior to delivery, shipments, transportation, control of schedule and quality, pre-commissioning and completion, performance guarantee testing during construction and commissioning of the project and through the defects liability period.
- 67. Phase 2: The construction contracts will comprise the following:
  - Lot 1, Rehabilitation of Gates & Hydraulic Steel Structures (International competitive bidding, single stage, one envelope):
  - Rehabilitation of hydraulic steel structures and hydro-mechanical equipment intake maintenance and emergency-maintenance gates, draft tube outlet gates, hydraulic steel structures related cranes etc.
  - Bottom outlets, spillway gates, penstocks
  - Lot 2, Rehabilitation of Unit 2 and Unit 4 (International competitive bidding, 2 stage with prequalification):
  - Replacement/rehabilitation of turbines of Unit 2 and Unit 4
  - Replacement of turbine speed governor systems for Unit 2 and Unit 4
  - Replacement/rehabilitation (and Upgrade) of generators of Unit 2 and Unit 4
  - Replacement of excitation systems for Unit 2 and Unit 4
  - Replacement of main transformers for Unit 2 and Unit 4
  - Replacement of unit control and protection systems for Unit 2 and Unit 4
  - Replacement of temperature / unit condition monitoring systems for Unit 2 and Unit 4
  - Replacement of isolated phase bus ducts for Unit 2 and Unit 4
  - Replacement of electrical and mechanical auxiliary systems not covered by Phase 1
  - Replacement/Rehabilitation of powerhouse travelling cranes
- 68. <u>Phase 3</u>. For project due diligence, it is expected that the consultant will undertake the following due diligence:

- (i) **Technical.** Identify priority rehabilitation needs. Prepare feasibility studies and cost estimates. Prepare scope of project component. Define technical specifications.
- (ii) **Procurement.** Prepare project implementation schedule and project procurement plan (taking into account the ongoing Phase 1 and Phase 2 project)
- (iii) **Economic and financial.** Conduct economic and financial analysis with sensitivity analysis. Conduct financial management assessment including investment projections of EPP to assess financial sustainability.
- (iv) **Governance.** Review and update financial management, procurement, anticorruption, integrity and legal issues and mechanisms of EPP. Assess adequacy of corporate governance structure of the existing seven power sector companies and prepare program to implement modern corporate governance structure.
- (v) **Poverty and social.** Ensure compliance with core labor standards and national labor laws. Conduct a social and poverty analysis to assess impact of the project.
- (vi) **Safeguards.** Conduct environmental safeguard due diligence and prepare initial environmental examination

#### **Scope of Works and Expected Deliverables**

# 1. Inception Report

69. Within one month from the effectiveness of the contract, consultant will prepare a nd submit to PIU for approval of an Inception Report detailing the services he is to provide, including the capacity building in project management that the consultant will provide to PIU. The Inception Report will also include an overall project implementation schedule covering the bidding and construction stages as well as due diligence for Phase 3. The implementation schedule is to be maintained throughout the assignment and updated as required, with the necessary explanation of the reason for any changes.

#### 2. Phase 2: Turnkey Contract for Toktogul Powerhouse rehabilitation

70. The scope of works shall include but not limited to:

#### Year 1 & 2: Pre-Construction Phase

- Review and finalize the bidding documents, draft bidding documents for Contract
   will be prepared by project preparatory technical assistance consultant,
   Fichtner GmbH. Procurement method is 2 stage;
- Conduct the Prequalification process for Contract 1 in accordance to ADB's Users' Guide to Prequalification of Bidders (May 2014)<sup>20</sup>;
- Prepare bidding documents for Contract 2 based on report from inspections of hydraulic gates of Phase 1;
- Assist PIU in tendering procedure for all contracts including preparation of Invitation to Bids, sharing information with potential bidders during the prebidding meeting, providing clarifications to bidders during bid preparations, and issuing addenda to biding documents, if required;
- Assist PIU in technical and financial evaluation of bids for Toktogul Rehabilitation and prepare draft Technical Bid Evaluation Report and Financial Bid Evaluation

\_

<sup>&</sup>lt;sup>20</sup> http://www.adb.org/sites/default/files/spqd-prequalification-bidders.pdf

Report in accordance with ADB's Procurement Guidelines (2013, as amended from time to time) and ADB's Guide on Bid Evaluations (2009, as amended from time to time);

- Issue notice of award to the winning bidder, and;
- Prepare the contract for contract signing;
- Update Initial Environmental Examination (IEE) and Environmental Management Plan (EMP) accordingly.

#### Years 3-7: Construction/Rehabilitation Phase

- Supervision, inspection and monitoring of the civil, mechanical and electrical works
  of the Project to ensure that the works are carried out in accordance with the agreed
  schedules, design and specifications, and that the quality meets at the minimum, the
  required technical standards, specifications, systems and procedures;
- Regularly review manufacturing schedules and delivery schedules of equipment by the contractor;
- Monitor manufacturing progress and works by regular inspections to ensure the compliance to specifications and specified standard;
- Assist PIU in implementation of EMP;
- Perform environmental monitoring;
- Assist PIU in updating the IEE and EMP;
- Certify volume of works completed and/or as installed based on actual;
- Certify the payments to the contractors, after checking and verifying the contractor's measurements;
- Report regularly financial status of the project to PIU by:
  - Reporting the disbursement results and financial positions;
  - Actual cash flow position;
  - Performing detail variation analysis between estimated/budgeted position compared with the actual position;
  - Assessing future requirements and payments schedules;
  - Recommending possible measures for reducing expenditures, if any.
- Monitor compliance with environmental mitigation and management plans, and the contractor's health and safety plans;
- Preparation of work related certificates as appropriate:
- Review of suppliers equipment design and perform shop and/or witness tests/predelivery and on-site inspections and acceptance of the equipment as appropriate;
- Review and approve erection and construction drawings to ensure technical compliance and compatibility with specifications and other requirements;
- Review and approve factory testing procedures and factory test results submitted by the contractors;
- Witness factory testing of major equipment and issue corresponding certificates;
- Review and approve commissioning test procedures submitted by the contractor for equipment listed in Contract 1 and Contract 2;
- When works are ready for inspection and test for substantial completion:
  - Prepare a program for inspection and test,
  - Examine the works and assure that they are ready for operation
  - Issues taking over certificate to contractors, if the works are satisfactory for operation or instruct the contracts' remedial work and/or further test if failed the verification test.

- Undertake the review, monitoring, supervision of the EPC Contractor's work-related occupational health and safety program activities. In coordination with the EPC contractor, recommend appropriate revision if deemed necessary to ensure expedient, effective and efficient implementation of the safety work program of the EPC Contractor:
- Provide regular project reporting to EPP and other project stakeholders;
- Any other works not sufficiently described in the scope of services, but can be reasonably inferred as required and necessary to be undertaken to complete the project are presumed included in the scope of works of the Consultant.

#### Additional services

(i) The supervision consultant may also be required by EPP to undertake additional services determined to be necessary to resolve any critical problems as identified during the course of the implementation program provided, that such services are not reasonably covered by the scope of services in the contract.

#### 3. Phase 3: Due diligence

	jor Activities	Deliverables	Expected Completion Date
	mponent A: Hydroelectric Power Plant habilitation		
_	Assess progress in Phase 1and Phase 2 Toktogul Rehabilitation Project.	Inception Report	TBC
_	Assess operation history, status and original design of Toktogul HPP.		
_	Assess need and urgency for Toktogul HPP rehabilitation.		
_	Conduct detailed rehabilitation assessment for the Project, select priority for rehabilitation considering funding available. Prepare the Project feasibility study for Phase 3.	Technical report	TBC
-	Prepare scope of Project components (Phase 3).		
-	Define technical specifications and identify if upgrade of generating units is possible.		
-	Prepare bill of quantities and cost estimates.		
_	Prepare the implementation schedule of the Phase 3 taking into account ongoing Phase1 and Phase 2.		
_	Conduct economic and financial analysis with sensitivity analysis.	Economic and financial analysis	TBC
_	Review previous financial management assessment of EPP including financial projections.	Updated financial management assessment report	TBC
_	Conduct environmental safeguard due diligence including public consultation and information dissemination.	IEE report	TBC
_	Conduct social safeguard due diligence including social analysis, and public consultations and/or information dissemination.	Social analysis report	TBC

Major Activities	Expected Deliverables Completion Date
<ul> <li>Provide inputs to relevant attachments to the RRP.</li> </ul>	Draft RRP and its TBC attachments
<ul> <li>Prepare draft bidding documents for Phase 3.</li> </ul>	Draft Bidding documents TBC
<ul> <li>Prepare final report.</li> </ul>	Final Report TBC

EPP = Open Joint-Stock Company Electric Power Plants, HPP = hydroelectric power plant, IEE = initial environmental examination, RRP = Report and Recommendation of the President.

## 4. Training and Capacity Building

- 71. Training and mentoring of local contractors, engineers, EPP representatives and operators is a crucial part of the project. A capacity building program will require development and implementation which should include:
  - (i) Regular training of EPP engineering staff supporting the management of implementation;
  - (ii) Development of a program of workshops for EPP staff during project implementation;
  - (iii) Several operation and maintenance seminars for EPP staff on nearing project completion.
- 72. EPP should be involved at all stages of the project so that they can gain an understanding of the project process. EPP training and capacity building should be provided both to the EPP Project Management Unit in Bishkek and also to EPP provincial staff.
- 73. Records should be kept of all training and upon project commencement; a capacity building plan will also be agreed with EPP.
- 74. Training and mentoring should be an important part of recruitment or sub-consulting of Kyrgyz staff to support the project.

#### **Team Compositions and Qualifications Requirements for Key Experts**

- 75. The consultant should be a consulting engineering firm having adequate international experience in detailed design, selection, monitoring, supervision and co-ordination of contractors, commissioning, operation and maintenance of hydropower project. Specific experience is required in the area of the rehabilitation of live hydropower projects. Since the work will be carried out whilst Toktogul HPP powerhouse and switchyard are in operation, it is essential that the firm is familiar with the health, safety, and commercial operational aspects of working in close proximity to live electrical equipment. The consultant should meet ADB's eligibility criteria.
- 76. The following table gives estimates of the International and National Experts and person months required for the project

	Desitions	International Co	onsultants	National	Consultants
	Positions	Phase 3	Phase 2	Phase 3	Phase 2
1	Team Leader	8	22	-	-
2	Deputy Team Leader	-	-	10	60
3	Resident site manager – powerhouse specialist	0	65	-	-
4	Mechanical Engineer	6	23	10	40
5	Electrical Engineer	6	23	10	40
6	Civil Engineer	6	23	10	40
7	Hydro-mechanical engineer	6	19	10	30
8	Economist	5	0	10	0
9	Financial expert	5	0	10	0
10	Environmental, Health and Safety Expert	2	11	5	28
	Subtotal	44	186	75	238

77. The team will comprise a resident site team and visiting specialists. It is preferable that the international team leader, resident site manager and visiting specialist should be drawn from the permanent staff of the consulting firm.

# **B. Consultant for EPP Business Process Improvement**

- 78. EPP wishes to implement Enterprise Resources Planning (ERP) solution with the following objectives:
  - i. Efficient project management function;
  - ii. Achievement better financial management and faster financial reconciliation;
  - iii. Efficient asset management of the generations assets;
  - iv. Manage the organization with optimum utilization of enterprise resources and productive deployment of human resources;
  - v. Establish standard business processes and best business practice.
- 79. Adoption of latest technology is essential to fulfill the above objectives. The consultant will formulate and develop comprehensive EPP business improvement plan and supervise the entire process of ERP adoption.
- 80. The business process improvement will be implemented in 2 phases:
  - i. Phase 1 the consultant will assess the current business process by conducting and gap and need analysis and develop a business process modernization plan. Key aspects to assess:
    - a. Organization structure/human resource management;
    - b. Technical/operational performance;
    - c. Financial performance and control;
    - d. Financial management and accounting system:
    - e. Management information system;
    - f. Corporate governance/strategic planning.

- ii. Phase 2 implementation phase, the consultant will assist EPP in procurement of required hardware and software and supervision of ERP adoption process.
- 81. The recruitment of consultants will be carried out in accordance with *ADB's Guidelines* on the Use of Consultants (2013, as amended from time to time). Tables below shows the breakdown of experts and persons-months required:

		International	Consultants	National Consultants		
	Positions	P-M per expert	No. of Experts	P-M per expert	No. of Experts	
1	Team Leader/ERP expert	24	1	25	1	
2	IT Expert	20	1	25	1	
3	Business process improvement expert	8	1			
	Subtotal	52	3	50	2	

# C. Consultant for Power Sector Master Plan

- 82. The Government of the Kyrgyz Republic lacks a current Power Sector Master Plan that establish priorities, timeframes, and cost associated with power sector goals. The government's strategies are difficult to identify.
- 83. The Ministry of Energy and Industry will recruit an international firm to under a proposed master plan development. The projects identified under the master plan will increase energy security, efficiency, and transmission and generation expansion within the Kyrgyz Republic.
- 84. The master plan will (i) forecast demand, (ii) address policy measure to promote security and efficiency, and (iii) assess alternatives to meet forecast demand, including new domestic generation and transmission plants, import and export projects. The assignment also includes a training component where the consultant will train MOEI staff to update the master plan once it is completed.
- 85. Apart from the master plan, the consultant will also prepare a bankable due diligence/feasibility study for Uch Kurgan HPP to include:
  - Project need and justifications
  - Scope of works
  - Cost estimates, implementation plans and procurement arrangements
  - Project economic /financial internal rates of return and financial due diligence of EPP
  - Environmental assessment
  - Social impact assessment

# 86. Scope of works:

- i. Identification of future load centers and forecasts of demand of electricity for the next 20 years
- ii. Strategy to meet such increasing demand through domestic generations, including analysis on domestic fuel sources and consider the balance energy security and regional cooperation

- iii. Transmission grid development to connect generation facilities to expected load centers in accordance to the above mentioned conclusions
- iv. Analyze the planned sector interventions by the Government of Kyrgyz Republic development partners and the private sector and assessment of how such interventions meet Afghan needs
- v. Capacity development program to train MOEI staff in order for the master plan to be continuous live document even after the study is completed.
- 87. The recruitment of consultants will be carried out in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Tables below shows the breakdown of experts and persons-months required:

		International	Consultants	National C	onsultants
	Positions	P-M per expert	No. of Experts	P-M per expert	No. of Experts
1	Team leader/System Planning Specialist	6	1		
2	Power Generation Expert	5	1	5	1
3	Power Transmission Expert	5	1	5	1
4	Demand Forecast Expert	4	1	4	1
5	Environmental and social Expert	2	1	1	1
6	Economic and finance expert	4	1	4	1
7	Data collection			6	1
	Subtotal	26	6	25	6

#### D. Consultant for External Auditors

- 88. The objective is to the audit is to enable the auditor to express an opinion on the project financial statement to Toktogul Rehabilitation Phase 2 project for fiscal year 2015, 2016, 2017, 2018, 2019, 2020, 2021 and 2022. In total there will be three project financial statements for three different executing agencies: EPP, MOEI and SPF. The project is joint-financed by the Asian Development Bank and the Eurasian Development Bank.
- 89. The audit will be conducted in accordance with International Standards on Auditing (ISA) published by the International Auditing and Assurance Standards Board of the International Federation of Accountants (IFA) with special reference to ISA 800 (Auditor's Report on Special Purpose Audit Engagements) and to relevant ADB guidance. In conducting the project, special attention should be paid to the following:
  - a) External funds have been used in accordance with the conditions of the relevant financing agreements, with due attention to economy and efficiency and only for the purposed for which financing was provided. Relevant financing agreement is the Grant No XXXX-KGZ (SF) and Loan No. XXXX-KGZ (SF) agreements;
  - b) Goods and services financed have been procured in accordance with relevant financing agreements:

- c) The project financial statement have been prepared in accordance with generally accepted accounting principles and practices and give a true and fair view of the financial positions of the project for fiscal year 2015-2022.
- d) Review compliance of each of the financial covenant in the financing agreement.
- 90. The recruitment of consultants will be carried out in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Tables below shows the breakdown of experts and persons-months required:

		International	Consultants	National Consultants		
	Positions	P-M per expert	No. of Experts	P-M per expert	No. of Experts	
1	Team Leader/senior auditor	10	1			
2	Auditor	10	1			
3	Junior Auditor			15	1	
	Subtotal	20	2	15	1	

# E. Consultant for Asset Inventory and Revaluation

- 91. The objective of asset inventory and revaluation is to assist the Government of Kyrgyz Republic to capture and values its asset and account for them according to accounting standards to ensure good asset management practices and accurate and reliable accounting treatment.
- 92. Kyrgyz Republic power sector governance is implemented by the government through the State Property Fund and the Ministry of Energy and Industry. The State Property Fund acts as the owner and manager of the state-owned power companies with consist of the following:
  - i. Generation EPP and Chakan GES;
  - ii. Transmission National Electric Grid of Kyrgyzstan;
  - iii. Four distribution companies: Severelectro, Vostokelectro, Oshelectro and Jalalabadelectro;
- iv. District Heating Network Company for Bishkek, Bishkekteploset.
- 93. The State Property Fund wishes to engage an independent and experienced valuer for asset inventory and revaluation of power sector assets of the 7 power companies. The inventory and valuation must be done in accordance with accounting standards and valuation methodologies applied and accepted by the State Property Fund. The valuation is required to be supported by appropriate documentation setting out the underlying methodology, process and evidenced used to produce the valuation. This needs to make reference back to the underlying accounting standards and demonstrate full compliance with all aspects of the prescribed requirements.
- 94. The team will consist of power sector engineers (generations and transmissions) and accountants to carry out the following task:
  - Visit all generation assets for throughout verifications and physical inspections of all fixed generations assets;

- ii. Visit selected transmission and distributions networks and substations, sampling approach maybe utilize as appropriate;
- iii. Prepare a detailed computerized list of asset registers for all fixed assets in the 7 power companies;
- iv. Revaluation of fixed assets as per IFRS. Outcome of valuation detailing but not limited to the following:
  - Book value
  - Depreciated value
  - Net depreciated replacement value
  - Replacement values
  - Asset types, quantities
- v. Transfer of knowledge to power companies' staff to enable them to maintain and update the fixed assets registers.
- 95. The valuation works will entail engagement of 6 international consultant positions and 6 national consultant positions (indicative). The recruitment of consultants will be carried out in accordance with *ADB's Guidelines on the Use of Consultants* (2013, as amended from time to time). Tables below shows the breakdown of experts and persons-months required:

		International	Consultants	National C	onsultants
	Positions	P-M per expert	No. of Experts	P-M per expert	No. of Experts
1	Team Leader	8	1		
2	Electrical engineers (generation)	5	1	5	1
3	Electrical engineers (transmission and distribution)	5	1	5	1
4	Mechanical engineers (generation)	5	1	5	1
5	Mechanical engineers (transmission and distribution)	5	1	5	1
6	Accountants	10	1	8	1
7	Data collection			8	1
	Subtotal	38	6	36	6

## F. Environment and Hazardous Waste Expert – individual consultant

- 96. The objective is to support the project implementation unit of EPP in the environment aspect of ADB financed Toktogul Rehabilitation Phase 2 project. The consultant will work for the project implementation unit and project implementation consultant in monitoring and supervising the implementation of environment management plan.
- 97. The individual consultant will report to the head of the project implementation unit of EPP. The duration of the assignment is 3 years. Minimum qualification: university degree with at least 5 years of working experience in the field of health, safety and environment.

# 98. Specific tasks include:

- Review and endorse the environmental section of periodical project progress reports, ensure the quality of the bi-annual environmental monitoring reports before submission to EPP for submitting it to ADB and public disclosure in accordance with ADB Safeguard Policy Statement requirements;
- Supervise the development of an Emergency Response Plan and be responsible for quality assurance before submission to EPP for approval and then to ADB;
- Coordinate with the EPP Department of Service of Reliability and Safety to ensure the compliance with Environmental Management Plan (EMP) and the contractor's health and safety plans;
- Support project implementation consultant in reviewing the technical specifications and operating procedures related to the waste management and carry out the overall supervision of waste disposal;
- Perform regular site audits including project site, storage area, and the roads used for transportation of equipment to the project site and transportation of oils and other wastes from the project site to the storage and disposal sites, to ensure that all mitigation measures are implemented adequately. In case of discrepancies the consultant shall report immediately to EPP for implementing proper actions to establish the compliance with the EMP;
- Supervise, implement and review the updated Initial Environmental Examination as necessary.

## G. National Procurement Expert-Individual consultant

99. National Procurement Specialist will be hired for assistance project implementation under the Toktogul Rehabilitation Phase 2 project. The consultant will be reported directly to the project implementation unit of EPP, Ministry of Energy and Industry and State Property Funds.

#### 100. Specific tasks include:

Assist in preparation of all procurement and consultant recruitment related communication with ADB, consulting firms in accordance with ADB's Guidelines on the Use of Consultants, and ADB's Guidelines in Procurement. Activities includes: prepare advertisement and expression of interest; prepare request for proposals; assist the [Electric Power Plants, Ministry of Energy and Industry and State Property Funds] in conducting technical and financial evaluation of proposals and in preparing technical and financial evaluation report; assist in holding of Consultant Selection Committee (CSC) meeting(s) and preparation of required documents; Assist in consolidating Submission 1-4 for submission to ADB; and Coordinate and facilitate communication between ADB and EPP, Ministry of Energy and Industry and State Property Funds on Submission 1-4, Assist EPP, Ministry of Energy and Industry and State Property Funds] in holding negotiations with the most technical responsive bidder and in preparing the required documents for such negotiations; assist in finalizing of contract and issuance of notice to proceed to winning consultant; assist in preparation of contract variation(if needed);

- Prepare all required documents necessary for carrying out of international and local bids for procurement of international and local consultants' services, goods and construction work:
- Carry out bids, prepare reports on bids, agreement with the ADB;
- Contract management (contract preparation, signing, supervise the execution of contracts, amending, closeout etc.);
- Carry out technical assessment of preliminary and final subproject drafts, maintain all required procedures on approval of design estimates, its registration and transferring to the contractor for implementation;
- Assistance and consultation of project and construction organizations;
- The Procurement Specialist ensures that the project activities comply with conditions set out in the Financing Agreement between the Government and ADB;
- Any other procurement related work as and when requested by EPP, Ministry of Energy and Industry and State Property Funds.

#### VIII. SAFEGUARDS

- 101. The project is classified as environmental category B under ADB's Safeguard Policy Statement (2009). An initial environmental examination (IEE) including an environmental management plan (EMP) was prepared and disclosed per ADB public disclosure requirements. As necessary, the IEE will be updated by the PIU and the implementation consultant (PIC) based on detailed design by the turnkey contractor.
- 102. The main environmental impacts of the project include: (i) occupation health and safety at the project site, (ii) management of the used oil and grease wastes, (iii) disposal of scrap metal and other solid waste, and (iv) transportation of construction materials and heavy equipment to the project site, as well as generated wastes out of the project site. The EMP specifies adequate mitigation measures and a monitoring plan to address these impacts.
- 103. The PIU will be responsible for EMP implementation with assistance from the PIC and staff of EPP Department of Service of Reliability and Safety. An environmental and hazardous waste management specialist will be hired to work in PIU for building in-house capacity of EPP during the first 3 years upon commencement of the construction contract. The consultant will receive on-the-job training from PIC environmental specialists and will ensure EPP in-house capacity for environmental and hazardous waste management in place after 3 years.
- 104. Environmental mitigation measures will be included in the bidding documents. Environmental monitoring will be performed by the PIC. The cost for implementing the EMP will be covered by the loan and the grant. The costs of mitigation measures will be included in the turnkey contract, and the cost for environmental monitoring will be included in the consulting services of the PIC. EPP is responsible for transportation from the storage site and final disposal of scrap metals and released oils
- 105. Land Acquisition and Resettlement (LAR). The project is classified as Category C under ADB's Safeguard Policy Statement (2009). Project investments will be implemented in existing Toktogul HPP where land acquisition and resettlement (LAR) impacts are not envisaged. In the event that land acquisition and/or resettlement impacts are identified during project implementation, EPP to ensure that such impacts are addressed in accordance with the ADB's Safeguard Policy Statement (2009), including preparation of a land acquisition and resettlement plan in consultation with the affected people.

106. **Indigenous peoples.** The project is classified as Category C under ADB's Safeguard Policy Statement (2009). The project is not expected to affect Indigenous people as defined under the Safeguard Policy Statement.

#### IX. GENDER AND SOCIAL DIMENSIONS

- 107. **Gender.** The project is gender neutral, and monitoring is not required.
- 108. **Social dimensions.** The project does not entail impacts on affordability or operational employment opportunities. During construction the turnkey contractor will be required to ensure equal opportunities for all social groups, equal pay for equal work regardless of gender, and prohibition of child labor. The contractor will also be required to undertake HIV/AIDS awareness activities with imported workers.

# X. 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
Impact Increased reliability of national and regional power systems	10-year average exports of 2,000 GWh/year continued in 2025 (2013 baseline: 10-year average exports of 2,015 GWh)  Growth in domestic supply from 9,000 GWh in 2014 to 11,400 GWh in 2025 to match economic growth	Annual report by Central Asian Power System Coordinated Dispatch Center  EPP financial statements  Central Asia Regional Economic Cooperation Program sector reports	Assumptions Continued demand in export markets for summer electricity at market tariff rates  300 MW of commercial export projects commissioned  Growth in domestic demand reduced to a sustainable rate  Risks Reduction in exports due to reduced water volume and/or lack of regional cooperation  Retail tariffs are not increased in accordance with the Medium Term Tariff Plan
Outcome Improved operational performance of EPP	Efficiency of Toktogul units 2 and 4 increased by 2.5 percentage points—from 90% in 2014 to 92.5 % in 2021  EPP DSCR improved from 0.25 in 2014 to at least 1.3 in 2020.  EPP debt–equity ratio improved from 65:35 in 2014 to 70:30 in 2022	Operation reports of Toktogul HPP  EPP management reports  Corporate audit reports of EPP	Assumption EPP wholesale tariffs are increased Risks Failures of units 1 and 3 of Toktogul Failure of other HPPs and combined heat and power plants
Outputs 1. Toktogul HPP rehabilitated	Toktogul HPP unit 2 operating at 360 MW capacity by 2021 (2014 baseline: 300 MW)  Toktogul HPP unit 4 operating at 360 MW by 2020 (2014 baseline: 300 MW)	Commissioning certificate	Assumption Scope of hydraulic repairs will be confirmed in 2015  Risk Need for additional rehabilitation is identified during execution

			Data Sources		
	Performance T		and Reporting		
Design Summary	Indicators with Baselines		Mechanisms	Assumptions and Risks	
Asset inventory and revaluation prepared	Audited accounts of seven power companies and Bishkek heat company included revalued assets in their respective corporate accounts starting in 2019  ERP system produced required management and financial reports by 2020		Company corporate audited accounts	Assumption State Property Fund ensures full data disclosure by the energy companies  Risk Complexity of estimating remaining asset life may result in below optimal value	
Kyrgyz Republic power sector master plan developed	Report is accepted by the Ministry of Energy and Industry and posted on its website by 2017		Power sector master plan	Assumption Data is made available to the consultant	
				Risk Disagreement on dem because below-cost ta assumptions may produnsustainable growth	ariff duce
4. EPP business process improved improvement strat recommended by		tegies	EPP business process improvement report	Assumption EPP remains committed to implementing modernization measures	
	ERP system commenced by 2020		ERP project completion report and commissioning certificate	Risk Bureaucratic procedures may delay implementation of proposed improvements	
Activities with Milestones		Scheduled Start	Scheduled Finish	Input	(\$ million)
1. Toktogul HPP units	2 and 4				
rehabilitated		Nov 2014		Loan	
	1.1 Recruit Consultant 1.2 Procure contractor hydraulic		May 2015 Sep 2016	ADB (ADF) EDB	65.50 100.00
	<ul><li>.3 Procure contractor units 2 and 4</li><li>.4 Hydraulic steel structure repaired</li></ul>		Jul 2016 Aug 2018 Dec 2021	Grant ADB (ADF)	44.50
2. Asset inventory and revaluation prepared		Feb 2017		Government EPP	40.68 1.00
<ul><li>2.1 Recruit consultant</li><li>2.2 Execute assignment</li><li>3. Kyrgyz power sector master plan developed</li></ul>		Sep 2015 Jul 2015	Jul 2015 Jun 2016	Total:	251.68
3.1 Recruit consultant		May 2015	Feb 2016		
3.2 Execute assignment		Mar 2016	Mar 2017		
4. EPP business process improved		May 2040	Fab 2017		
4.1 Recruit consultant 4.2 Procure ERP contractor		May 2016 Jan 2018	Feb 2017		
4.2 Produce ERP contractor 4.3 Commission ERP system		Sep 2019	Sep 2019 Sep 2020		
ADB = Asian Developm				dobt corvice coverage	ratio EDR -

ADB = Asian Development Bank, ADF = Asian Development Fund, DSCR = debt-service coverage ratio, EDB = Eurasian Development Bank, EPP = Open Joint-Stock Company Electric Power Plants, ERP = enterprise resource planning, GWh = gigawatt-hour, HPP = hydroelectric power plant, MW = megawatt. Source: Asian Development Bank.

# B. Monitoring

109. **Project performance monitoring.** Following indicators will be updated in the quarterly progress reports and at the time of semi-annual meetings and the midterm review expected in two years from the date of loan effectiveness.

Indicator	Units	EA responsible for data collection and Reporting
Additional generating capacity by Toktogul HPPs	MW	EPP
Load factor for Toktogul HPPs	%	EPP
Monthly volume of power traded within Kyrgyz Republic, by source	kWh/month, \$/kWh, \$ month	MOEI from EPP
Monthly volume of power traded between Kyrgyz Republic and CAPS	kWh/month, \$/kWh, \$ month	MOEI from EPP
EPP financial statement	n/a	EPP

EPP = Open Joint-Stock Company Electric Power Plants, HPP = hydroelectric power plant, kWh = kilowatt-hour, MOEI = Ministry of Energy and Industry, MW = megawatt.

- 110. **Compliance monitoring**: Loan covenants i.e., policy, legal, financial, economic, environmental, and others, will be monitored through semi-annual project meeting and the midterm review.
- 111. **Environmental monitoring.** Monitoring will be performed by the PIC and reported to PIU. Monitoring results and the implementation of mitigation measures will be included in the project quarterly progress reports and submitted to the PIU. With assistance from the PIC, the PIU is responsible for development, in-country disclosure, and submission to ADB of semi-annual environmental monitoring reports.
- 112. **Gender and social dimensions monitoring**: Monitoring is not required for gender as the project does not have a gender element. Monitoring on equal employment opportunities for all social groups, equal pay for equal work regardless of gender, and prohibition of child labor will be monitored by the PIC and EPP's PIU. The monitoring results will be included in the quarterly progress reports, and semi-annual environmental reports.

# C. Evaluation

- 113. **Inception Mission.** ADB will field an inception mission after loan signing to (i) establish a working relationship between ADB and the EAs; and (ii) to ensure that the Borrower and EAs understand ADB's procedures.
- 114. **Review Missions.** ADB will field review missions at least once a year to review overall implementation of the project and update project implementation schedule based on mission findings.

- 115. **Midterm Review Mission.** ADB will field a midterm review mission after two years of loan/grant signing to assess whether attainment of the project's immediate objective (purpose in terms of the design and monitoring framework) is still likely.
- 116. **Project Completion Review Mission.** ADB will field a project completion review (PCR) mission upon physical completion of the project to commence preparation of ADB's project completion report. MOEI, in coordination with EPP and SPF, will submit a project completion report to ADB within 6 months of physical completion of the project.<sup>21</sup>

#### D. Reporting

- 117. EPP, MOEI and SPF will provide ADB with (i) quarterly progress reports, including a section on safeguard compliance, in a format consistent with ADB's project performance reporting system; (ii) bi-annual environmental monitoring reports within one month after each half of the calendar year and post-construction environmental audit after project completion; (iii) 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; and (iv) a project completion report within 6 months of physical completion of the Project. To ensure projects continue to be both viable and sustainable, project financial statements and audited corporate financial statements of EPP together with the associated auditor's report, should be adequately reviewed.
- 118. Each executing agency (EPP, MOEI and SPF) is responsible for submission of reports to ADB (with copy to MOEI) for their components in Russian and English languages. MOE is responsible for preparation and submission to ADB of consolidated annual reports and project completion report. EPP and SPF shall prepare and submit to MOEI their section of the consolidated reports in a timely manner.

# E. Stakeholder Communication Strategy

- 119. Project information will be strategically disseminated through media at main milestones including loan signing, contract awards and project completion. A functional Grievance Redress Mechanism (GRM) as proposed in the IEE will be established and approved by an ordinance of EPP. EPP is responsible to inform affected people about the GRM.
- 120. The following table outlines the framework of communication strategy to be adopted for the project.

Project Documents	Means of Communication	Responsible Party	Frequency	Audience(s)
Project Information Documents (PID)	ADB 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	Draft DMF after post fact-finding mission	Project-affected people
Environment Impact	ADB's website	ADB	At least 120 days	General public,

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

52

Project Documents	Means of Communication	Responsible Party	Frequency	Audience(s)
Assessment			before Board consideration	project-affected people in particular
Resettlement Planning Documents	ADB's website	ADB	Post fact-finding mission	General public, project-affected people in particular
Report and Recommendations of the President	ADB's website	ADB	Within 2 weeks of Board approval of the loan	General public
Legal Agreements	ADB's website	ADB	No later than 14 days of approval of the project	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 Manual	ADB's website	ADB	After loan negotiations	General public, project-affected people in particular
Social and Environmental Monitoring Reports	ADB's website	ADB	Routinely disclosed, no specific requirements	General public
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

#### XI. **ANTICORRUPTION POLICY**

121. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.<sup>22</sup> All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADBfinanced activity and may not be awarded any contracts under the project.<sup>23</sup>

Available at: <a href="http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf">http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf</a>
 ADB's Integrity Office web site is available at: <a href="http://www.adb.org/integrity/unit.asp">http://www.adb.org/integrity/unit.asp</a>

53

To support these efforts, relevant provisions are included in the financing agreements 122. and the bidding documents for the project.

#### XII. **ACCOUNTABILITY MECHANISM**

People who are, or may in the future be, adversely affected by the project may submit complaints to ADB or request the review of ADB's compliance under the Accountability Mechanisms. <sup>24</sup>

#### XIII. **RECORD OF PAM CHANGE**

<sup>&</sup>lt;sup>24</sup> For further information see: <a href="http://compliance.adb.org/">http://compliance.adb.org/</a>