

# Project Administration Manual

Project Number: 48025  
Loan Numbers: L3527-UZB, L4000-UZB  
Version as of 17 November 2020

Republic of Uzbekistan: Central Asia Regional  
Economic Cooperation Corridor 2 (Pap–Namangan–  
Andijan) Railway Electrification Project – Additional  
Financing

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
CAREC	–	Central Asia Regional Economic Cooperation
EMP	–	environmental management plan
EMR	–	environmental monitoring report
IEE	–	initial environmental examination
km	–	kilometer
LARP	–	land acquisition and resettlement plan
MIFT	–	Ministry of Investments and Foreign Trade
MOF	–	Ministry of Finance
PAM	–	project administration manual
PIU-E	–	project implementation unit for electrification
PIU-ET	–	project implementation unit for electrification and renewal of rolling stock
TRTA	–	transaction technical assistance
UTY	–	Joint Stock Company O'zbekiston Temir Yo'llari

## **CONTENTS**

<b>I.</b>	<b>PROJECT DESCRIPTION</b>	<b>1</b>
<b>II.</b>	<b>IMPLEMENTATION PLANS</b>	<b>3</b>
	A. Project Readiness Activities	3
	B. Overall Project Implementation Plan	4
<b>III.</b>	<b>PROJECT MANAGEMENT ARRANGEMENTS</b>	<b>5</b>
	A. Project Implementation Organizations: Roles and Responsibilities	5
	B. Key Persons Involved in Implementation	6
	C. Project Organization Structure	7
<b>IV.</b>	<b>COSTS AND FINANCING</b>	<b>8</b>
	A. Cost Estimates Preparation and Revisions	9
	B. Key Assumptions	9
	C. Detailed Cost Estimates by Expenditure Category	11
	D. Allocation and Withdrawal of Loan Proceeds	13
	E. Detailed Cost Estimates by Financier	14
	F. Detailed Cost Estimates by Outputs	16
	G. Detailed Cost Estimates by Year	18
	H. Contract and Disbursement S-Curves	20
	I. Fund Flow Diagram	22
<b>V.</b>	<b>FINANCIAL MANAGEMENT</b>	<b>23</b>
	A. Financial Management Assessment	23
	B. Disbursement	26
	C. Accounting	27
	D. Auditing and Public Disclosure	27
<b>VI.</b>	<b>PROCUREMENT AND CONSULTING SERVICES</b>	<b>29</b>
	A. Project Procurement Risk Assessment	29
	B. Advance Contracting and Retroactive Financing	29
	C. Procurement of Goods, Works, and Consulting Services	30
	D. Procurement Plans	32
	E. Consultants' Terms of Reference	39
<b>VII.</b>	<b>SAFEGUARDS</b>	<b>40</b>
	A. Environment	41
	B. Resettlement	42
	C. Indigenous Peoples	45
<b>VIII.</b>	<b>GENDER AND SOCIAL DIMENSIONS</b>	<b>46</b>
<b>IX.</b>	<b>PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION</b>	<b>47</b>
	A. Revised Design and Monitoring Framework	47
	B. Monitoring	50
	C. Evaluation	51
	D. Reporting	51
	E. Stakeholder Communication Strategy	51
<b>X.</b>	<b>ANTICORRUPTION POLICY</b>	<b>53</b>
<b>XI.</b>	<b>ACCOUNTABILITY MECHANISM</b>	<b>54</b>

XII.	RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL	55
	TERMS OF REFERENCE FOR ENGINEERING AND CONSTRUCTION SUPERVISION CONSULTANTS (CURRENT PROJECT)	56
	TERMS OF REFERENCE FOR PROJECT MANAGEMENT AND TRAIN MANAGEMENT SYSTEM CONSULTANTS (ADDITIONAL FINANCING)	73

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

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

The O'zbekiston Temir Yo'llari (UTY) is wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by UTY 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 loan 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 loan agreement, the provisions of the loan 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.



## I. PROJECT DESCRIPTION

1. The railway network in eastern Uzbekistan consists of a loop linking Pap, Namangan, Andijan, Asaka, Margilan, and Kokand, and a line from Pap through the Kamchik tunnel to Angren and further on to Tashkent. A number of branch lines also extend into the Kyrgyz Republic and Tajikistan. These lines provide a vital connection for both passenger and freight transport, between major cities in the Fergana Valley, as well as to Tashkent and beyond. The lines are also part of regional transport corridors linking East Asia with Europe through Central Asia.

2. The current project aims to electrify the missing 145.1 kilometers (km) of single-track non-electrified track between Pap, Namangan and Andijan. With this, electrification of this network will be broadly complete. However, permanent signaling and telecommunications systems are missing for the section between Angren, Pap, Kokand and Andijan, greatly affecting the efficiency and safety of train operations. There are also limits on the number of trains that can be run, due to the shortage of traction substations.

3. The additional financing will complete the modernization of the railway network in the Fergana Valley, by installing signaling and telecommunications in the missing sections as stated in para 2. The additional financing will complete works originally envisaged to be completed under the project referred to as “Construction of electrified railway line Angren-Pap with electrification of the railway section Pap-Kokand-Andijan,” which covers the installation of additional signaling, telecommunication and video surveillance systems, construction of traction substations at Kokand and Asaka, as provided for in the government’s feasibility study for the project approved by the instructions of the Cabinet of Ministers of the Republic of Uzbekistan No PKM-642 dated 20 August 2016. This scope of work was planned to receive financial support from the World Bank.<sup>1</sup> However, procurement delays led to the cancellation of the amount associated with this component, and the loan was closed in March 2020. This decision took place amidst a challenging procurement landscape facing Uzbekistan in 2017 and 2018, where all international financial institutions (IFIs) faced delays across all sectors. ADB and O’zbekiston Temir Yo’llari (UTY) exercised patience and steadily worked with the government to formulate new procedures that are fully compatible with the rules and regulations of IFIs. Since then, implementation of ADB-financed projects has accelerated. With this additional financing, UTY will be able to complete the modernization of this part of the network, and trains will be able to travel safely and at more frequent intervals between the towns and cities within the Fergana Valley, as well as to and from Tashkent. This will reduce journey times and monetary cost of travel for the population in the Fergana Valley, improve access for women and children to safer transport, with gender-inclusive facilities in trains and at modernized stations which are already in place, and enhance access of the population to essential facilities, most of which are located in the cities of Andijan and Kokand. Prior to seeking the additional financing, UTY and the government has already constructed the external power supply lines between the two new traction substations at Asaka and Kokand and the power grid: this will be considered an associated/existing facility.

4. **Impact and Outcome.** The project is aligned with the following impact(s): (i) stimulated economic growth in the Fergana Valley, and (ii) improved connectivity and increased regional trade along CAREC Corridor 2.<sup>2</sup> The project will have the following outcome: level of rail passenger and freight service in, to and from the Fergana Valley improved.<sup>3</sup>

---

<sup>1</sup> World Bank. [Pap–Angren Railway](#).

<sup>2</sup> A Defined by project; b ADB. 2014. CAREC Transport and Trade Facilitation Strategy 2020. Manila.

<sup>3</sup> The design and monitoring framework is in Appendix 1.

5. **Outputs.** The current project has the following two outputs:

- (i) **Output 1.** Railway infrastructure along the Pap-Namangan-Andijan railway line upgraded. This includes electrification of 145.1 km of the main railway line to 27.5 kilovolts alternating current, construction of 2 traction substations and dispatcher points, purchase of maintenance equipment and machinery, modernization of signaling and communications facilities, and construction of external power supply facilities which will transmit electricity from the main grid to the traction substations.
- (ii) **Output 2.** Safety of railway operations improved. UTY's institutional capacity will be strengthened, especially with regards to operational safety for general public along the railway. With the project, it is expected that train frequencies and speeds will increase. Also, the presence of the power lines may pose additional risks of electrocution. To offset any potential negative impacts which may arise, the project will support UTY in (i) conducting an assessment of the existing and anticipated safety situation to the general public including women and children, (ii) supporting the development of practical countermeasures, and (iii) training of staff (including female staff) to plan future railway developments in the safest manner.

The proposed additional financing will expand the existing outputs and include two new outputs to complete the modernization of the railway network as described below:

- (iii) **Output 3.** Railway infrastructure along the Angren-Pap-Kokand-Andijan line upgraded. This output will focus primarily on the supply and installation of the missing signaling and telecommunications system on 441km of existing track, including four branch lines adjacent to the main line,<sup>4</sup> which will allow UTY to operate trains safely and at increased frequency, thus maximizing the utility of existing infrastructure. To allow a larger number of trains to be run, 2 traction substations will be constructed and a further two upgraded and connected to a supervisory control and data acquisition (SCADA) and external power supply. Two sectioning posts will also be constructed. Machinery and equipment for maintenance of electrified lines, as well as for upgrading of Kokand depot will also be acquired and commissioned.
- (iv) **Output 4.** Train control and management system upgraded. The completion of the installation of signaling and telecommunications system will allow UTY to control and manage all train movements in the Fergana Valley from the central train control center in Tashkent. ADB will add value to the project through this output, through which (i) the central train control center in Tashkent will be upgraded, (ii) an automated train scheduling system will be made functional, and (iii) staff members, including all relevant female technical staff will be trained on the modernized train control and management system.

---

<sup>4</sup> The main line between Angren–Pap–Kokand–Andijan is 300.8 km. Branch lines are from Kokand to the border with Tajikistan, from Margilon to the border with the Kyrgyz Republic, from Margilon to Fergana 1 station, and from Block Post 331 to the border with the Kyrgyz Republic (total of 140.2 km). Furthermore, telecoms (but not signaling) will be installed on two more branch lines, namely Asaka-Sharihan, and Andijan 2-Tetakcai, in total of 33.3 km.



## II. IMPLEMENTATION PLANS

### A. Project Readiness Activities

**Table 1: Project Readiness Activities for Loan 3527-UZB**

Indicative Activities	2016	2017											Responsibility
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Advance contracting actions	X	X	X	X	X	X	X	X	X	X	X	X	UTY/UTY PIU-ET
Establish project implementation arrangements	X												UTY/UTY PIU-ET
Loan negotiations			X										ADB, government and UTY
ADB Board consideration					X								ADB
Loan signing												X	ADB and government
Government legal opinion provided												X	Government
Government budget inclusion		X											Government
Loan effectiveness												X	ADB and government

ADB = Asian Development Bank, PIU-ET = Project Implementation Unit for Electrification and Renewal of Rolling Stock,  
 UTY = Joint Stock Company O'zbekiston Temir Yo'llari.

Source: Asian Development Bank.

**Table 2: Project Readiness Activities for Additional Financing**

Indicative Activities	2020							2021	Responsibility
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Advance contracting actions	X	X	X	X	X	X	X		UTY/UTY PIU-ET
Establish project implementation arrangements	X								UTY/UTY PIU-ET
Loan negotiations			X	X					ADB, government and UTY
ADB Board consideration						X			ADB
Loan signing							X		ADB and government
Government legal opinion provided							X		Government
Government budget inclusion	X								Government
Loan effectiveness								X	ADB and government

ADB = Asian Development Bank, PIU-ET = Project Implementation Unit for Electrification and Renewal of Rolling Stock,  
 UTY = Joint Stock Company O'zbekiston Temir Yo'llari.

Source: Asian Development Bank.

## B. Overall Project Implementation Plan

6. The overall project implementation plan records outputs with key implementation activities. This is updated annually and submitted to ADB with contract and disbursement projections for the following year. The latest version is in Table 3, denoting activities for the current project in blue, and activities for the additional financing in red.

**Table 3: Project Implementation Plan**

Indicative Activities	2016				2017				2018				2019				2020				2021				2022				2023				2024				2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
<b>A. DMF</b>																																								
<b>Output 1</b> Railway infrastructure along the Pap-Namangan-Andijan line upgraded																																								
<b>Output 2</b> Operational safety of railways in the Fergana valley improved																																								
<b>Output 3</b> Railway infrastructure along the Angren-Pap-Kokand-Andijan line upgraded																																								
<b>Output 4</b> Train control and management system upgraded																																								
<b>B. Management Activities</b>																																								
Procurement plan key activities to procure contract packages																																								
Consultant selection procedures																																								
Environment management plan key activities																																								
Communication strategy key activities																																								
Annual (small circles) and midterm review (large circles)																																								
Project completion report																																								

DMF = design and monitoring framework.

Source: Asian Development Bank.

### III. PROJECT MANAGEMENT ARRANGEMENTS

#### A. Project Implementation Organizations: Roles and Responsibilities

**Table 4: Project implementation organizations**

Project Implementation Organizations	Management Roles and Responsibilities
UTY (executing agency) and its Project Implementation Unit for Electrification and Renewal of Rolling Stock	<ul style="list-style-type: none"> <li>• Coordinate project implementation, including with JSC “National Electric Networks of Uzbekistan”</li> <li>• Hire additional staff for PIU with the required expertise, as necessary</li> <li>• Enhance procurement capacity, especially in relation to international competitive bidding</li> <li>• Recruit consultants</li> <li>• Procure works and goods</li> <li>• Update procurement plan annually and as needed to reflect changes agreed with ADB (implement only after ADB approval)</li> <li>• Monitor procurement activities and key milestones and submit the status to ADB with the quarterly progress report</li> <li>• Manage contracts</li> <li>• Ensure timely provision of agreed counterpart funds for project activities</li> <li>• Submit withdrawal applications to ADB</li> <li>• Maintain project financial statements</li> <li>• Ensure project financial audits are conducted and recommendations are implemented within the agreed timeframe</li> <li>• Disclose project documents</li> <li>• Involve beneficiaries and civil society representatives in all stages of project design and implementation</li> <li>• Monitoring and evaluate project activities and outputs, and prepare review reports reflecting issues and time-bound actions taken or to be taken</li> <li>• Prepare quarterly progress reports and a project completion report, and ensure timely submission of reports to ADB</li> <li>• Ensure compliance with all loan covenants</li> <li>• Ensure project's sustainability during post implementation stage and report to ADB on the assessed development impacts</li> </ul>
ADB	<ul style="list-style-type: none"> <li>• Assist UTU in providing timely guidance at each stage of the project for smooth implementation in accordance the agreed implementation arrangements</li> <li>• Review all documents that require ADB approval</li> <li>• Conduct periodic loan review, mid-term review, and completion review missions</li> <li>• Supervise compliance with all loan covenants</li> <li>• Timely process withdrawal applications and release eligible funds</li> <li>• Supervise the compliance with financial audit recommendations</li> <li>• Regularly update the project performance review reports with the assistance of UTU</li> <li>• Regularly post on ADB web the updated project data sheet and updated project documents including the PAM, procurement plan, APFS, and safeguards documents</li> </ul>
Ministry of Finance	<ul style="list-style-type: none"> <li>• Sign the loan agreement</li> <li>• Monitor project implementation and provide respective coordination and facilitation</li> <li>• Allocate and release counterpart funds</li> </ul>

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> <li>• Ensure timely reimbursement of taxes and duties</li> <li>• Endorse to ADB the authorized staff with approved signatures for processing of withdrawal applications</li> <li>• Process and submit to ADB any request, when required, for reallocating loan proceeds</li> </ul>
Ministry of Investments and Foreign Trade (formerly State Committee of Investments)	<ul style="list-style-type: none"> <li>• Serve as the focal point for the government for ADB</li> <li>• Register contracts for imported goods</li> <li>• Monitor project implementation and facilitate the resolution of implementation challenges if they arise</li> </ul>

ADB = Asian Development Bank, APFS = audited project financial statement, MOF = Ministry of Finance, PAM = project administration manual, PIU-ET = project implementation unit for electrification and renewal of rolling stock, UTY = O'zbekiston Temir Yo'llari.

Source: Asian Development Bank.

## B. Key Persons Involved in Implementation

### Executing Agency

O'zbekiston Temir Yo'llari

Khusnutdin Khasilov  
Acting Chairman  
Telephone: +998 71 238 8003  
7, T. Shevchenko str., 100060 Tashkent  
Republic of Uzbekistan

Project Implementation Unit

Alisher Djuraev  
Head, Project Implementation Unit for Electrification and  
Renewal of Rolling Stock, UTY  
Telephone: +998 71 237 9195  
Fax: +998 71 238 8449  
Email address: utypiu@gmail.com  
7, T. Shevchenko str., 100060 Tashkent  
Republic of Uzbekistan

### Asian Development Bank

Transport and Communications  
Division, Central and West Asia  
Department

Dong-Soo Pyo  
Director  
Telephone No.: +63 2 632 6765  
Email address: dspyo@adb.org  
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila  
Philippines

Project Officer

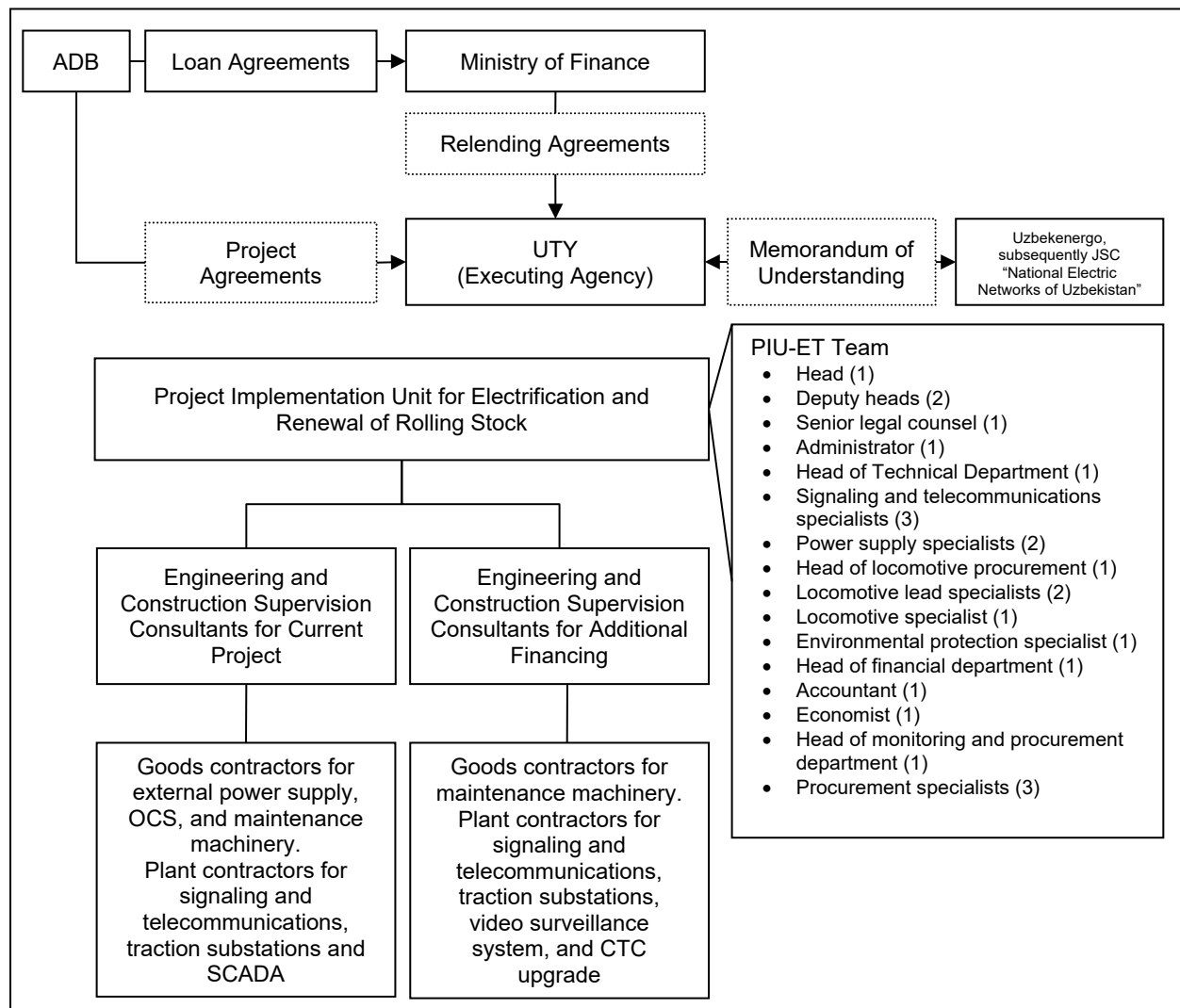
Ko Sakamoto  
Principal Transport Specialist  
Telephone No.: +63 2 683 1664  
Email address: ksakamoto@adb.org  
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila  
Philippines

## **C. Project Organization Structure**

7. UTY, the executing agency (EA), is adequately staffed and uses acceptable financial management, has good management practices and a sound track record with project implementation. Implementation arrangements build on ADB's successful railway project experiences in the country. UTY established a project implementation unit for electrification (PIU-E) on 1 May 2011, which became fully operational following UTY's internal order 163 issued on 16 March 2012. On 6 December 2018, based on the order of the First Deputy Chairman of the Board of UTY No. 2188-N, PIU-E merged with another PIU which hitherto implemented projects for the procurement of rolling stock. PIU-E was renamed as the Project Implementation Unit for Electrification and Renewal of Rolling Stock (PIU-ET). The PIU-ET comprises 23 staff including the head, two deputy heads, senior legal counsel, administrator, head of technical department, three signaling and telecommunications specialists, three power supply specialists, one locomotive specialist, one environmental protection specialist, head of financial department, one accountant, one economist, one head of monitoring and procurement department, and two procurement specialists. PIU-ET staff have experience of undertaking projects financed by international financial institutions, including those financed by ADB.

8. International and national experts are engaged as engineering and construction supervision consultants. Contract modalities include design and build work, hence the engineering and construction supervision consultants' role is to manage contracts with PIU-ET and give hands-on training in procurement, project management and oversight, operation and maintenance, and reporting.

**Figure 1: Project organization structure**



ADB = Asian Development Bank, CTC = central train control, OCS = overhead catenary systems, PIU-ET = project implementation unit for electrification and renewal of rolling stock = UTY = O'zbekiston Temir Yo'llari.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari.

#### **IV. COSTS AND FINANCING**

9. The overall project is estimated to cost \$341.50 million, out of which the current project is estimated at \$177.5 million, and the additional financing is estimated at \$164.00 million (Table 5). For additional financing, The government has requested a regular loan of \$121.00 million from ADB's ordinary capital resources to finance supervision consultants; procurement of plant (design, delivery, installation and commissioning) of traction substations and transformers, signaling and telecom and installation of supervisory control and data acquisition (SCADA) system, video surveillance system, train management system at the central train control (CTC) center; and procurement of goods for machinery and equipment for railway maintenance. The government and UTY are expected to finance the balance, which will cover land acquisition and resettlement, civil works, taxes and duties and financing charges during implementation.

**Table 5: Project Investment Plan**  
(\$ million)

Item	Current Amount <sup>a</sup>	Additional Financing <sup>b</sup>	Total
<b>A. Base Cost<sup>c</sup></b>			
1. Railway infrastructure along the Pap-Namangan-Andijan railway line upgraded	163.6	0.0	163.6
2. Safety of railway operations improved	5.3	0.0	5.3
3. Railway infrastructure along the Angren-Pap-Kokand-Andijan line upgraded	0.0	143.1	143.1
4. Train control and management system upgraded	0.0	2.6	2.6
<b>Subtotal (A)</b>	<b>168.9</b>	<b>145.6</b>	<b>314.5</b>
<b>B. Contingencies<sup>d</sup></b>	<b>6.0</b>	<b>12.2</b>	<b>18.2</b>
<b>C. Financing Charges During Implementation<sup>e</sup></b>	<b>2.6</b>	<b>6.1</b>	<b>8.7</b>
<b>Total (A+B+C)</b>	<b>177.5</b>	<b>164.0</b>	<b>341.5</b>

<sup>a</sup> Refers to the original amount. Includes taxes and duties of \$15.45 million financed from government resources.

<sup>b</sup> Includes taxes and duties of \$22.7 million to be financed from government resources, with taxes on a cash-contribution basis and duties on an exemption basis. Such amount does not represent an excessive share of the project cost. Also includes design and civil works and contingencies for such work, amounting to \$20.3 million.

<sup>c</sup> In mid-2020 prices as of 15 June 2020.

<sup>d</sup> Physical contingencies computed at 7.6% for goods, plant and consultancy services. Price contingencies computed at 1.3% on foreign exchange costs and 12.1% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>e</sup> Includes interest and commitment charges. Interest during construction for a regular OCR loan has been computed at the 5-year forward London interbank offered rate plus a spread of 0.5%. Financing charges include an assumed 1.0% on lending fee charged by the government to UTY. Commitment charges for a regular OCR loan are 0.15% per year to be charged on the undisbursed loan amount.

Sources: Asian Development Bank and O'zbekiston Temir Yo'llari estimates.

10. The proposed financing plan is in Table 6.

**Table 6: Financing Plan**

Source	Current <sup>a</sup>		Additional Financing		Total	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
ADB						
OCR (regular loan)	80.0	45.1	121.0	73.8	201.0	58.9
Government	97.5	54.9	43.0	26.2	140.5	41.1
<b>Total</b>	<b>177.5</b>	<b>100.0</b>	<b>164.0</b>	<b>100.0</b>	<b>341.5</b>	<b>100.0</b>

ADB = Asian Development Bank, OCR = ordinary capital resources.

<sup>a</sup> Refers to the original amount and any previous additional financing.

Sources: Asian Development Bank and O'zbekiston Temir Yo'llari estimates.

## **A. Cost Estimates Preparation and Revisions**

11. Costs have been estimated by UTY and ADB staff, based on information acquired from UTY's feasibility study, and benchmarking against recently procured packages. Revisions and updates to the cost estimates during implementation are the responsibility of UTY, supported by supervision consultants.

## **B. Key Assumptions**

12. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: SUM10,148.31 = \$1.00 (as of 02 June 2020).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

**Table 7: Escalation Rates for Price Contingency Calculation**

<b>Item</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Average</b>
Foreign rate of price inflation	-0.5%	1.6%	1.7%	1.7%	1.8%	1.3%
Domestic rate of price inflation	13.0%	10.0%	9.0%	8.0%	7.0%	9.4%

Sources: World Bank estimates (foreign rate); Asian Development Bank estimates (domestic rates).



## C. Detailed Cost Estimates by Expenditure Category

**Table 8: Detailed Cost Estimates by Expenditure Category - Loan 3527-UZB**

Item	Foreign Exchange (\$ million)	Local Currency <sup>b</sup> (\$ million)	Total Cost (\$ million)	% of Total Base Cost
<b>A. Investment Costs</b>				
1. Electrification System Installation				
a. Base Structure				
i. Preparatory works				
ii. Track facilities				
iii. Buildings and structures				
b. Traction substations, section post and material for overhead catenary				
c. Signaling and telecommunications				
d. SCADA system				
e. Procurement of machinery and equipment				
f. External power supply				
i. Preparatory works and installation				
ii. Equipment and materials				
2. Supervision Consultants				
3. Administrative expenses <sup>a</sup>				
<b>Total Base Cost (A)</b>	<b>77.21</b>	<b>21.82</b>	<b>99.03</b>	100.0%
<b>B. Taxes and Duties</b>	<b>0.00</b>	<b>15.45</b>	<b>15.45</b>	15.6%
<b>C. Contingencies</b>				
1. Physical	0.79	0.48	1.27	1.3%
2. Price	2.00	0.32	2.32	2.3%
<b>Subtotal (C)</b>	<b>2.79</b>	<b>0.80</b>	<b>3.59</b>	3.6%
<b>D. Financial Charges During Implementation</b>	<b>3.20</b>	<b>0.00</b>	<b>3.20</b>	3.2%
<b>Total Project Cost (A+B+C+D)</b>	<b>83.20</b>	<b>38.07</b>	<b>121.27</b>	122.5%

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

<sup>a</sup> Includes costs for land acquisition and resettlement, studies, monitoring and reporting.

<sup>b</sup> Local currency amounts have been adjusted to account for changes in the foreign exchange rate to the US dollar since time of approval..

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

**Table 9: Detailed Cost Estimates by Expenditure Category - Additional Financing**

<b>Item</b>	<b>Foreign Exchange (\$ million)</b>	<b>Local Currency (\$ million)</b>	<b>Total Cost (\$ million)</b>	<b>% of Total Project Cost</b>
<b>A. Investment Costs</b>				
1. Signaling and Telecommunications System Installation				
a. Base Structure				
b. Traction substations and transformers				
c. Signaling and telecommunications				
d. Video surveillance system				
e. Maintenance machinery and equipment				
f. Train control system				
2. Supervision Consultants				
<b>Subtotal (A)</b>				
<b>B. Recurrent Costs</b>				
1. Administrative Costs				
<b>Subtotal (B)</b>				
<b>C. Taxes and Duties</b>	<b>0.0</b>	<b>22.7</b>	<b>22.7</b>	<b>13.8%</b>
<b>D. Contingencies*</b>				
1. Physical	8.1	1.2	9.3	5.7%
2. Price	1.5	1.4	2.9	1.8%
<b>Subtotal (D)</b>	<b>9.6</b>	<b>2.6</b>	<b>12.2</b>	<b>7.4%</b>
<b>E. Financial Charges During Implementation</b>	<b>6.1</b>	<b>0.0</b>	<b>6.1</b>	<b>3.7%</b>
<b>Total Project Cost (A+B+C+D+E)</b>	<b>127.1</b>	<b>36.9</b>	<b>164.0</b>	<b>100.0%</b>

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

Notes: Numbers may not sum precisely because of rounding.  
Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

**D. Allocation and Withdrawal of Loan Proceeds**

**Table 10: Allocation and Withdrawal of Loan Proceeds - Loan 3527-UZB**

<b>Number</b>	<b>Item</b>	<b>Total Amount Allocated for ADB Financing (\$) Category</b>	<b>Basis for Withdrawal from the Loan Account</b>
1	Plant, goods, and consultancy services for electrification system installation	80,000,000	100% of total expenditure claimed*
	Total	80,000,000	

\* Exclusive of taxes and duties imposed within the territory of the Borrower. Inclusive of contingencies.

**Table 11: Allocation and Withdrawal of Loan Proceeds - Additional Financing**

<b>Number</b>	<b>Item</b>	<b>Total Amount Allocated for ADB Financing (\$) Category</b>	<b>Basis for Withdrawal from the Loan Account</b>
1	Works, Goods and Consulting Services	121,000,000	100% of total expenditure claimed*,**
	Total	121,000,000	

\* Exclusive of taxes and duties imposed within the territory of the Borrower. Inclusive of contingencies.

\*\* Subject to the condition for withdrawal described in the Loan Agreement, paragraph 6 of Schedule 3.

## E. Detailed Cost Estimates by Financier

**Table 12: Detailed Cost Estimates by Financier - Loan 3527-UZB**

Item	ADB (\$ million)	% of Cost Category	UTY/Gov't (\$ million)	% of Cost Category	Total Cost (\$ million)
<b>A. Investment Costs</b>					
1. Electrification System Installation					
a. Base Structure					
i. Preparatory Works					
ii. Track facilities					
iii. Buildings and structures					
b. Traction substations, section post and material for overhead catenary					
c. Signaling and telecommunications					
d. SCADA system					
e. Procurement of machinery and equipment					
f. External power supply					
i. Preparatory works and installation					
ii. Equipment and materials					
2. Supervision Consultants					
3. Administrative expenses					
<b>Total Base Cost (A)</b>	<b>77.21</b>	78%	<b>21.82</b>	22%	<b>99.03</b>
<b>B. Taxes and Duties</b>	<b>0.00</b>	0%	<b>15.45</b>	100%	<b>15.45</b>
<b>C. Contingencies</b>					
1. Physical	0.79	62%	0.48	38%	1.27
2. Price	2.00	86%	0.32	14%	2.32
<b>Subtotal (C)</b>	<b>2.79</b>	78%	<b>0.80</b>	22%	<b>3.59</b>
<b>D. Financial Charges During Implementation</b>	<b>0.00</b>	0%	<b>3.20</b>	100%	<b>3.20</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>80.00</b>	66.0%	<b>41.27</b>	34.0%	<b>121.27</b>

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

Notes: Numbers may not sum precisely because of rounding.

ADB's financing percentage on specific sub-items (to be covered by ADB) under each category will be 100% net of tax.

UTY and government's contributions paid in local currency have been adjusted to account for changes in the foreign exchange rate to the US dollar since time of approval. The total \$41.27 million contribution from UTY and the government is equivalent to \$97.45 million at the time of approval of the loan.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

**Table 13: Detailed Cost Estimates by Financier – Additional Financing**

<b>Item</b>	<b>ADB (\$ million)</b>	<b>% of Cost Category</b>	<b>UTY/Gov't (\$ million)</b>	<b>% of Cost Category</b>	<b>Total Cost (\$ million)</b>
<b>A. Investment Costs</b>					
1. Signaling and Telecommunications System Installation					
a. Base Structure					
b. Traction substations and transformers					
c. Signaling and telecommunications					
d. Video surveillance system					
e. Maintenance machinery and equipment					
f. Train control system					
2. Supervision Consultants					
<b>Subtotal (A)</b>					
<b>B. Recurrent Costs</b>					
1. Administrative Costs					
<b>Subtotal (B)</b>					
<b>C. Contingencies</b>					
1. Physical	8.1	74.5%	2.8	25.5%	10.9
2. Price	1.5	44.3%	1.9	55.7%	3.4
<b>Subtotal (C)</b>	<b>9.6</b>	<b>67.3%</b>	<b>4.7</b>	<b>32.7%</b>	<b>14.3</b>
<b>D. Financial Charges During Implementation</b>	<b>0.0</b>	<b>0.0%</b>	<b>6.1</b>	<b>100.0%</b>	<b>6.1</b>
<b>Total Project Cost (A+B+C+D)</b>	<b>121.0</b>	<b>73.8%</b>	<b>43.0</b>	<b>26.2%</b>	<b>164.0</b>

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

Notes: Numbers may not sum precisely because of rounding.

ADB's financing percentage on specific sub-items (to be covered by ADB) under each category will be 100% net of tax.

UTY/Government contribution includes taxes and duties of \$22.7 million, and other costs in total of \$20.3 million not shared with ADB.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

## F. Detailed Cost Estimates by Outputs

**Table 14: Detailed Cost Estimates by Outputs – L3527-UZB**  
(\$ million)

Item	Total Cost (\$ million)	Output 1 (\$ million)		Output 2 (\$ million)	
		Amount	% of Cost Category	Amount	% of Cost Category
<b>A. Investment Costs</b>					
1. Electrification System Installation					
a. Base Structure					
i. Preparatory Works					
ii. Track facilities					
iii. Buildings and structures					
b. Traction substations, section post and material for overhead catenary					
c. Signaling and telecommunications					
d. SCADA system					
e. Procurement of machinery and equipment					
f. External power supply					
i. Preparatory works and installation					
ii. Equipment and materials					
2. Supervision Consultants					
3. Administrative expenses <sup>a</sup>					
<b>Total Base Cost (A)</b>	<b>99.03</b>	<b>94.93</b>	95.9%	<b>4.10</b>	4.3%
<b>B. Taxes and Duties</b>	<b>15.45</b>	<b>15.45</b>	100.0%	<b>0.00</b>	0.0%
<b>C. Contingencies</b>					
1. Physical	1.27	1.22	95.7%	0.05	4.5%
2. Price	2.33	2.22	95.7%	0.10	4.5%
<b>Subtotal (C)</b>	<b>3.59</b>	<b>3.44</b>	96.0%	<b>0.16</b>	4.5%
<b>D. Financial Charges During Implementation</b>	<b>3.21</b>	<b>3.07</b>	95.7%	<b>0.14</b>	4.5%
<b>Total Project Cost (A+B+C+D)</b>	<b>121.27</b>	<b>116.89</b>	96.4%	<b>4.39</b>	3.8%

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

<sup>a</sup> Includes costs for land acquisition and resettlement, studies, monitoring, and reporting.

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

Table 15: Detailed Cost Estimates by Outputs – Additional Financing

Item	Total Cost (\$ million)	Output 1 (\$ million)		Output 2 (\$ million)	
		Amount	% of Cost Category	Amount	% of Cost Category
<b>A. Investment Costs</b>					
1. Signaling and Telecommunications System Installation					
a. Base Structure					
b. Traction substations and transformers					
c. Signaling and telecommunications					
d. Video surveillance system					
e. Maintenance machinery and equipment					
f. Train control system					
2. Supervision Consultants					
<b>Subtotal (A)</b>					
<b>B. Recurrent Costs</b>					
1. Administrative Costs					
<b>Subtotal (B)</b>					
<b>C. Taxes and Duties</b>	<b>22.7</b>	<b>22.3</b>	98.2%	<b>0.4</b>	1.8%
<b>D. Contingencies</b>					
1. Physical	9.3	9.1	98.2%	0.2	1.8%
2. Price	2.9	2.8	98.2%	0.1	1.8%
<b>Subtotal (D)</b>	<b>12.2</b>	<b>12.0</b>	98.2%	<b>0.2</b>	1.8%
<b>E. Financial Charges During Implementation</b>	<b>6.1</b>	<b>6.0</b>	98.2%	<b>0.1</b>	1.8%
<b>Total Project Cost (A+B+C+D+E)</b>	<b>164.0</b>	<b>161.1</b>	98.2%	<b>2.9</b>	1.8%

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

Notes: Numbers may not sum precisely because of rounding.  
Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

## G. Detailed Cost Estimates by Year

**Table 16: Detailed Cost Estimates by Year – L3527-UZB**  
(\$ million)

Item	Total Cost (\$ million)	2017	2018	2019	2020
<b>A. Investment Costs</b>					
1. Electrification System Installation					
a. Base Structure					
i. Preparatory Works					
ii. Track facilities					
iii. Buildings and structures					
b. Traction substations, section post and material for overhead catenary					
c. Signaling and telecommunications					
d. SCADA system					
e. Procurement of machinery and equipment					
f. External power supply					
i. Preparatory works and installation					
ii. Equipment and materials					
2. Supervision Consultants					
3. Administrative expenses <sup>a</sup>					
<b>Total Base Cost (A)</b>					
<b>B. Taxes and Duties</b>	15.45	7.14	3.84	2.53	1.94
<b>C. Contingencies</b>					
1. Physical	1.27	0.21	0.42	0.42	0.21
2. Price	2.32	0.39	0.77	0.77	0.39
<b>Subtotal (C)</b>	3.59	0.60	1.20	1.20	0.60
<b>D. Financial Charges During Implementation</b>	3.20	0.09	0.30	1.18	1.62
<b>Total Project Cost (A+B+C+D)</b>	121.27	14.85	32.44	60.59	13.38

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

<sup>a</sup> Includes costs for land acquisition and resettlement, studies, monitoring, and reporting.

Notes: Numbers may not sum precisely because of rounding. Local costs are inclusive of a mandatory 10% allowance to account for foreseen cost inflation.

Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.



**Table 17: Detailed Cost Estimates by Year – Additional Financing**

Item	Total Cost (\$ million)	2020	2021	2022	2023	2024
<b>A. Investment Costs</b>						
1. Signaling and Telecommunications System Installation						
a. Base Structure						
b. Traction substations and transformers						
c. Signaling and telecommunications						
d. Video surveillance system						
e. Maintenance machinery and equipment						
f. Train control system						
2. Supervision Consultants						
<b>Subtotal (A)</b>						
<b>B. Recurrent Costs</b>						
1. Administrative Costs						
<b>Subtotal (B)</b>						
<b>C. Taxes and Duties</b>	22.7	0.1	6.8	8.3	7.3	0.1
<b>D. Contingencies</b>						
1. Physical	9.3	0.0	2.8	3.4	3.0	0.1
2. Price	2.9	0.0	0.9	1.1	0.9	0.0
<b>Subtotal (D)</b>	12.2	0.0	3.7	4.5	3.9	0.1
<b>E. Financial Charges During Implementation</b>	6.1	0.0	0.5	1.3	2.0	2.3
<b>Total Project Cost (A+B+C+D+E)</b>	164.0	0.8	48.0	59.1	52.9	3.2

[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]

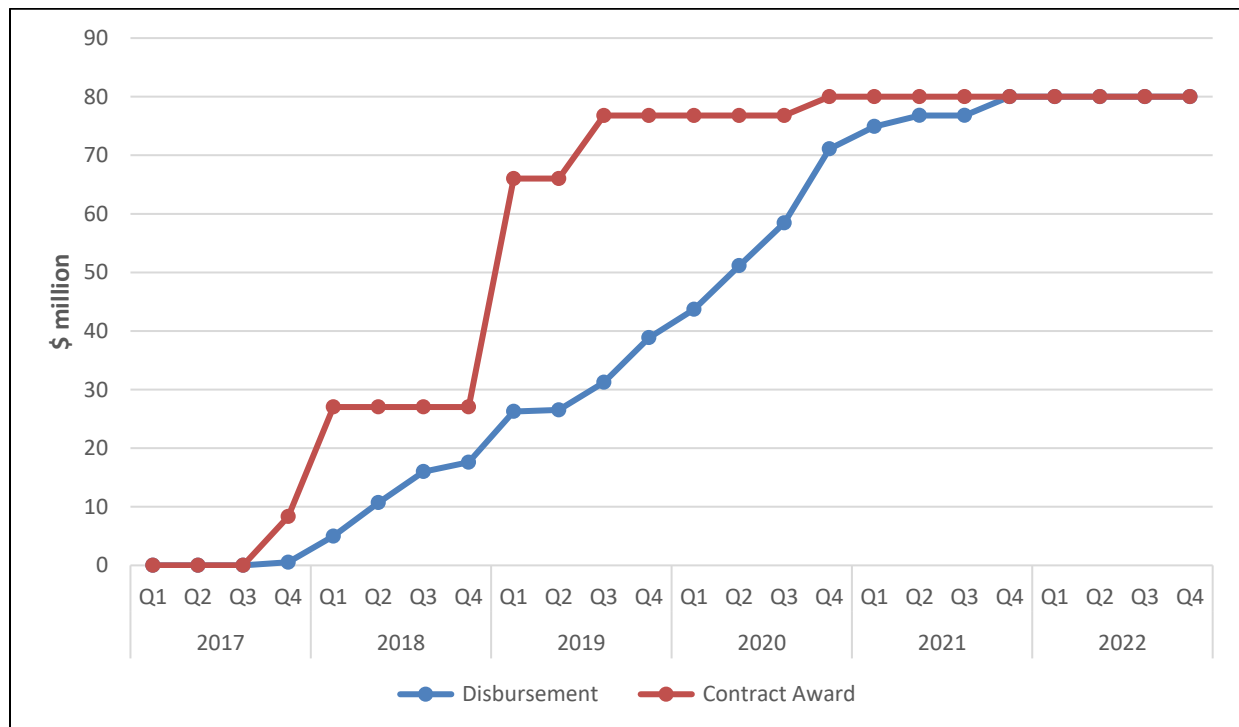
Notes: Numbers may not sum precisely because of rounding.  
Source: Asian Development Bank and O'zbekiston Temir Yo'llari staff estimates.

## H. Contract and Disbursement S-Curves

13. The S-curves are only for ADB financing, which will be recorded in ADB's systems and reported through e-Ops. The projection for contract awards includes contingencies and unallocated amounts, but excludes front-end fees, service charges, and interest during construction. The cumulative disbursements at project completion is equal to the full loan amount, with project completion defined as up to 4 months after loan closing.

### 1. Loan 3527-UZB

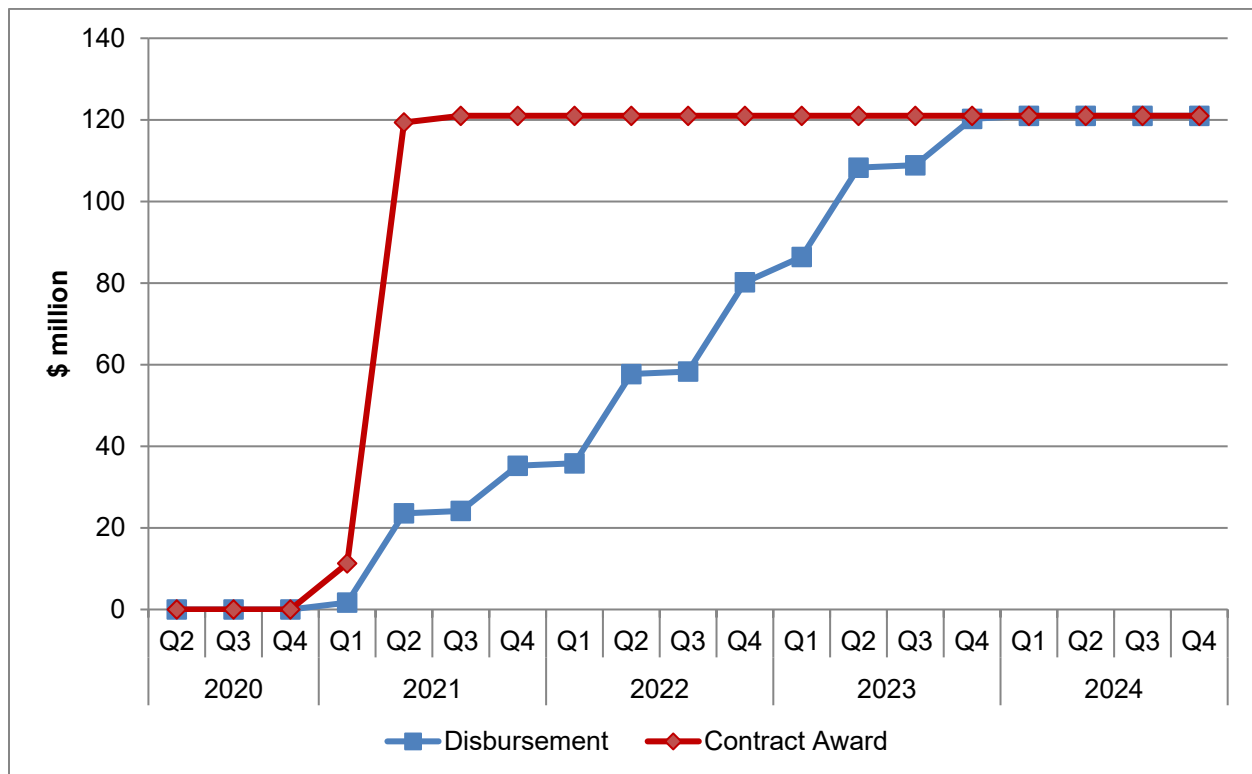
**Contract Awards and Disbursements**



	Contract Awards (in \$ million)					Disbursements (in \$ million)				
Year	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2017	0.00	0.00	0.00	8.33	8.33	0.00	0.00	0.00	0.52	0.52
2018	18.70	0.00	0.00	0.00	18.70	4.46	5.71	5.30	1.60	17.07
2019	38.98	0.00	10.76	0.00	49.74	8.66	0.27	4.70	7.63	21.26
2020	0.00	0.00	0.00	3.21	3.21	4.85	7.43	7.30	12.63	32.21
2021	0.00	0.00	0.00	0.00	0.00	3.83	1.89	0.00	3.21	8.93
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Contract Awards					80.00	Total Disbursements				80.00

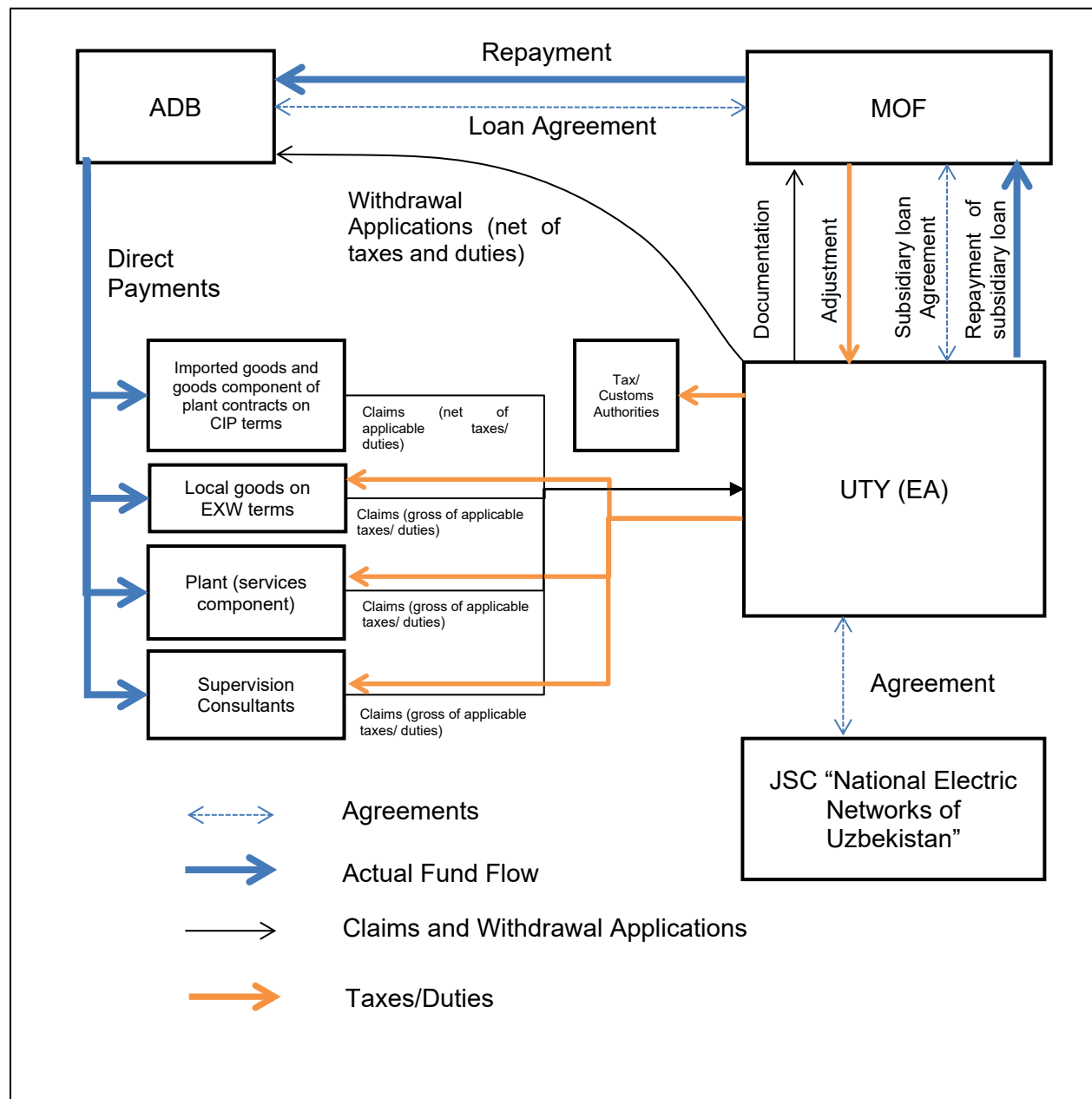
## 2. Additional Financing

### Contract Awards and Disbursements



Year	Contract Awards (in \$ million)					Disbursement (in \$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	11.30	108.07	1.63	0.00	121.00	1.69	21.88	0.59	11.07	35.24
2022	0.00	0.00	0.00	0.00	0.00	0.59	21.88	0.59	21.88	44.95
2023	0.00	0.00	0.00	0.00	0.00	6.21	21.88	0.59	11.38	40.06
2024	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.75
Total Contract Awards					121.00	Total Disbursements				121.00

## I. Fund Flow Diagram



## V. FINANCIAL MANAGEMENT

### A. Financial Management Assessment

14. The financial management assessment (FMA) updated in accordance with ADB's current technical guidance<sup>5</sup> the assessment for the CAREC Corridor 2 (Pap-Namangan-Andijan) Railway Electrification Project, conducted in October 2016 and updated from time to time.

15. The FMA considered the capacity of the UTY, including funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. The assessment concluded that UTY's current project financial management practices, policies and procedures are capable of implementing the project in compliance with ADB requirements. This is backed by UTY and the PIU's ongoing track record of successfully managing projects financed by ADB and other international financial institutions.

16. **Executing agency.** UTY is a joint stock company, with a long and successful history of implementing capital projects and managing the railway network of Uzbekistan. The PIU-ET has been in existence since 2012, is situated within the UTY structure and has a successful record of implementing projects financed by ADB and other international financial institutions. Some new staff of PIU-ET have less familiarity with ADB financial management procedures and requirements. UTY's financial performance has dipped in 2018 due to its non-core business, especially for coal production and processing, which the government temporarily placed on UTY's responsibility to benefit from its strong management ability. However, the government has expedited the process of removing non-core businesses from UTY's balance sheet. Coal production and processing has already been taken out in March 2020 through a Cabinet of Ministers Resolution 998 on 14 December 2019. Further divestment of non-core businesses will be officialized by 30 June 2021.

17. **Fund flow arrangements.** UTY and the PIU-ET have enough capacity and capability to work under the proposed fund flow arrangements acceptable to ADB. The fund flow arrangements are generally the same as which was successfully applied in an ongoing ADB-financed project of similar nature, but with amendments on the approach to payment of taxes and duties (see Section B. Disbursement).

18. **Staffing.** The PIU-ET comprises 23 staff including 1 accountant. In addition, there are more than 20 staff in the central accounting group in Tashkent including two Deputy Heads. UTY accounting personnel are assigned to PIUs to oversee project accounting activities and ensure that UTY accounting staff complete the project accounting requirements accurately and timely. Accounting staff receive training regularly at the UTY Institute and externally from the Association of Accountants and Auditors and the Academy for State and Public Construction.

19. **Accounting policies and procedures.** UTY accounts for its operations and projects in accordance with International Financial Reporting Standards (IFRS) and Cash Basis International Public Sector Accounting Standard (IPSAS) respectively. Policies and procedures are documented in an accounting manual. UTY's Finance and Accounting Department is capable of providing all necessary data for the project (in both local and foreign currencies). Segregation of duties is specified including budgeting system, payments, policies and procedures, cash and

---

<sup>5</sup> Financial Due Diligence: A Methodology Note (ADB, January 2009), ADB Financial Management Technical Guidance Note: Financial Management Assessment (ADB, May 2015)

bank, safeguard over assets, other offices, and implementing agencies.

20. **Internal and external audit.** UTY's financial statements are audited annually by an internal audit function and an external auditor. The latest external audit, covering the financial year ending 31 December 2018 was conducted by HLB Tashkent and delivered on 30 November 2019. Audit findings are a subject of consideration by the Supervisory Board of UTY.

21. **Reporting and Monitoring.** The PIU-ET reports to UTY's Investments Department, Directorate on Capital Construction, MOF, MIFT and UTY's accounting department monthly and weekly as required. The auditor expressed a qualified opinion on the entity financial statements for FY2018. The basis of the opinion includes a lack of a unified accounting policy among the group companies and noncompliance with the valuation method in business combinations required by IFRS.

22. **Information systems.** The PIU-ET uses its own system which is capable of monitoring and reporting all key elements necessary for effective project management. The UTY Finance and Accounting Department's accounting system is structured for the National Accounting Standards of Uzbekistan. The PIU-ET system and the finance and accounting department system are not fully integrated and UTY accounting staff is required to manually enter data produced by the PIU-ET system into UTY's central accounting system.

### Financial Risk Assessment and Mitigation Measures

	Risk Assessment*	Mitigation Measures
<b>Inherent Risk</b>		
1. Country-specific risks	S	UTY to perform close monitoring of cash flows, especially in foreign hard currencies to allow proper and on time debt servicing.
2. Entity-specific risks	S	The government to further divest non-core businesses from UTY by 30 June 2021.
3. Project-specific risks	M	Implement the project in full adherence with ADB financial management guidelines.
<b>Overall Inherent Risk</b>	S	
<b>Control Risk</b>		
1. Executing Agency	M	Undertake mitigation measures as outlined in the financial management action plan below.
2. Fund Flow Arrangements	M	Continue to undertake disbursement based on ADB rules. Government to expedite the passing of a decree to provide full clarity on the mechanism for payment of value-added-tax.
3. Staffing	M	PIU-ET to retain and further improve capacity of its staff on financial management, through the conduct of training in line with ADB guidelines and Uzbek national legislation.
4. Accounting Policies and Procedures	M	Accounting policies adhere to International Financial Reporting Standards (IFRS) and Cash Basis International Public Sector Accounting Standard (IPSAS).
5. Internal Audit	M	Based on work plan for internal audit, periodic control procedures are implemented for internal audit. The internal audit work plan covers projects implementation conducted/to be conducted by PIU-ET.

	<b>Risk Assessment*</b>	<b>Mitigation Measures</b>
6. External Audit	M	UTY to continue engaging external auditors on a timely basis, and provide such auditors with full information to complete the audit.
7. Reporting and Monitoring	S	UTY has adhered to reporting and monitoring requirements of ADB, albeit with delay to submission of APFSs. UTU to move to block audit of 3 years for earlier submission and address the qualified audit opinion by engaging external consultant(s) and a valuation company.
8. Information Systems	M	UTU to accelerate the integration of its financial management software across departments.
<b>Overall control risk</b>	<b>M</b>	

\* H = High, S = Substantial, M = Moderate, N = Negligible or Low.

ADB = Asian Development Bank, EA = executing agency, IAS = international accounting standards, IFRS = international financial reporting standards, MOE = Ministry of Economy, MOF = Ministry of Finance, NAS = national accounting standards, PIU-ET = project implementation unit for electrification and renewal of rolling stock, UTU = O'zbekiston Temir Yo'llari.

Source: ADB staff and consultants.

23. It is considered that the overall premitigation financial management risk of the project is *substantial*. The borrower and UTU have agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in the table below.

<b>Financial Management Action Plan</b>			
<b>Key financial risk</b>	<b>Action plan</b>	<b>Responsibility</b>	<b>Timing</b>
Recent changes in government's procedures for the payment of taxes and duties may challenge timely payments.	- The government will expedite the passing of a decree to provide full clarity	Ministry of Finance (MOF)	By 1 January 2020
Foreign exchange risk on repayment of long-term loans denominated on foreign hard currency	- UTU Monitor foreign currency revenues from transit and use of wagons abroad, aiming to maintain 1.5X foreign currency debt payment for coming 12-month period. - Uzbekistan Government shall support UTU in covering foreign currency losses incurred due to foreign currency fluctuations, improving UTU payment capabilities in hard currencies; - In future, UTU design and install foreign currency hedging procedures to monitor and control risks related to foreign currency exchange rates fluctuations.	PIU-ET, financial and accounting function of UTU, Uzbekistan Government (MOF)	Project implementation and loan repayment period; on-going
Non-core business affecting overall financial performance	- UTU to consider a measure to protect its financial capacity from shouldering excessive non-core business, including a new covenant in the loan agreement for the government to pass a decree to (i) remove non-core businesses from UTU, and (ii) prevent UTU from acquiring noncore businesses in future. - UTU and the government shall monitor and report to ADB on an annual basis that there are no new decisions by the government which will have reversed the aforementioned decree.	Financial and accounting function of UTU, Uzbekistan Government (MOF)	By 30 June 2021.  Annually.

Staff training and knowledge sharing related to ADB regulations on Project management and implementation	<ul style="list-style-type: none"> <li>- PIU-ET staff to attend training organized by ADB corresponding Project monitoring unit, related to ADB regulations;</li> <li>- UTY financial and accounting staff to participate in trainings organized by professional bodies and specialized training centers related to country regulatory changes and updates.</li> </ul>	ADB unit for development of training materials and organization of training for PIU-ET staff; PIU-ET to participate in trainings and to be in line with all regulatory requirements and procedures; UTY management to hire/organize periodic trainings for financial and accounting staff to be in line with regulatory updates and recent changes.	Before and during project implementation and long-term debt servicing when necessary.
Limited integration of parts of information systems software used by PIU-ET/ UTY	- UTY and in particular PIU-ET need to use only fully integrated information systems, to have on-time full information in place and to avoid any mistakes in additional manual input of information from other blocks of information systems in use.	UTY	On-going
Delays in external audit	- UTY to move toward block (multi-year) audits. UTY to request and order interim audit missions, aiming to have mid-year financial statements in accordance with IFRS and to reduce the annual financial audit mission duration.	UTY, external auditors of UTY	Not later of September month of each financial year
Qualified audit opinion on the financial statements for FY2018	- UTY to hire external consultant(s) to develop unified accounting policy and update accordingly and an external valuation company to determine fair value of its fixed assets and in business combination for IFRS reporting purpose.	UTY	Within 1 year after loan effectiveness

## B. Disbursement

### 1. Disbursement Arrangements for ADB Funds

24. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time), and detailed arrangements agreed upon between the government and ADB. No withdrawals shall be made from the Loan Account until the Subsidiary Loan Agreement shall have been signed between the government and UTY, and become effective in accordance with its terms. Online training for project staff on disbursement policies and procedures is available.<sup>6</sup> Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

25. Direct payment procedures will be used for the plant (design, supply and installation) contracts, goods contracts, and consulting services. No imprest account will be established for this project.

26. UTY will be responsible for (i) preparing disbursement projections, (ii) requesting budgetary allocations for counterpart funds, (iii) collecting supporting documents, and (iv) preparing and sending withdrawal applications to ADB. Before the submission of the first withdrawal application, Government/UTY should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum

<sup>6</sup> Disbursement eLearning. [http://wpqr4.adb.org/disbursement\\_elearning](http://wpqr4.adb.org/disbursement_elearning).



value per withdrawal application set in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time). UTY is to consolidate claims to meet this limit. Withdrawal applications and supporting documents will demonstrate, among other things that the goods, and/or services were produced in or from ADB members, and are eligible for ADB financing. No withdrawals shall be made from the Loan Account until the Subsidiary Loan Agreement shall have been signed and become effective in accordance with its terms.

## **2. Disbursement Arrangements for Counterpart Fund**

27. All disbursements under government financing will be carried out in accordance with regulations of Uzbekistan relevant to co-financing of the projects financed by Multilateral Financing Organizations.

28. UTY is using own funds as counterpart funds for this project. In case of any shortfall in UTY's funding, the Borrower will seek and identify alternative sources of funding to ensure the successful completion of the project. A written guarantee is required at MOF and UTY level to ensure the timely disbursement of counterpart funding.

29. The government's counterpart funding will include financing of taxes and duties with an estimated amount of \$22.7 million. UTY will directly pay applicable taxes and duties claimed by tax/customs authorities in the case of imported goods and goods component of plant contracts. Contractors/consultants will make such payments for all others, and invoice UTY of such amount. UTY's PIU-ET will record the taxes and fees incurred on a monthly basis, and submit the report to UTY management. UTY will submit this report to MOF, and MOF will deduct the equivalent amount from UTY's tax obligations for the succeeding month. UTY will monitor the tax and duty reimbursement and will ensure transparency, efficiency and timeliness of the reimbursements. ADB loan proceeds will not be used for the tax financing or pre-financing.

## **C. Accounting**

30. UTY will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following cash-basis International Public Sector Accounting Standards (IPSAS). UTY will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

## **D. Auditing and Public Disclosure**

31. UTY will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the UTY.

32. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

33. In addition to annual audited project financial statements, UTY shall (i) provide its annual financial statements prepared in accordance with financing reporting standards acceptable to ADB; (ii) have its financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with auditing standards acceptable to ADB; (iii) as part of each such audit, have the auditors prepare the auditors' opinion(s) on the financial statements and compliance with the financial covenants of the Loan Agreement; and (iv) furnish to ADB, no later than 1 month after approval by the relevant authority, copies of such audited financial statements and auditors' opinion(s), all in the English language, and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request.

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

35. The government and UTY have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.<sup>7</sup> ADB reserves the right to require a change in the auditor (in a 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's financing is used in accordance with ADB's policies and procedures.

36. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.<sup>8</sup> After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.<sup>9</sup>

---

<sup>7</sup> ADB's approach and procedures regarding delayed submission of audited project financial statements:

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

<sup>8</sup> Access to Information Policy: <https://www.adb.org/documents/access-information-policy>.

<sup>9</sup> This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

## VI. PROCUREMENT AND CONSULTING SERVICES

### A. Project Procurement Risk Assessment

37. The design of the procurement packaging for the current project was informed by a project procurement risk assessment (PPRA) which was conducted by ADB project preparatory technical assistance consultants in late 2016.

38. For the additional financing, the procurement packaging was informed by (i) a strategic procurement planning and (ii) updated PPRA, both of which were conducted by transaction technical assistance (TRTA) consultants in December 2019.

39. The updated PPRA confirmed the overall procurement risk as Moderate, with mitigation. Two major risk areas were identified, as well as mitigation measures. These are summarized in the table below.

**Project Procurement Risk Assessment and Mitigation Measures**

<b>Risk Description</b>	<b>Risk Assessment*</b>	<b>Mitigation Measures or Risk Management Plan</b>
1. Delays in preparation and approval of the bidding documents and conducting of the bidding process, caused by unfamiliarity with the new ADB procurement policy and regulations	M	Uzbekistan Resident Mission provided training to PIU-ET procurement staff in the new ADB procurement Regulations. TRTA procurement consultant is providing on-the-job training and assisting PIU-ET in managing procurement during Project preparation stage. After the Project becomes effective, assistance will be provided by international project management/supervision consultants. All procurement-related decisions will be subject to prior review by ADB.
2. Safety and operational risks if the train management system at CTC in Tashkent is procured separately from the existing system financed under the current project.	M	The scope of the train management system at Central Train Control center in Tashkent currently under implementation by the incumbent contractor for Signaling and Telecoms under the current project will be extended through a direct contract to cover the whole Fergana Valley railway system.
Overall procurement risk	M	(with mitigation measures)

\* E = extreme, H = High, M = Medium, L = Low.

ADB = Asian Development Bank, EA = executing agency, PIU-ET = project implementation unit for electrification and renewal of rolling stock, TRTA = transaction technical assistance, UTY = O'zbekiston Temir Yo'llari.

Source: ADB staff and consultants.

### B. Advance Contracting and Retroactive Financing

40. Contracting is completed for all packages under the current project (L3527-UZB). For the additional financing, all advance contracting and retroactive financing will be undertaken in conformity with ADB Procurement Policy and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower and UTY have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

41. **Advance contracting.** To expedite project implementation, advance contracting will be

conducted for project management consulting services, as well as all goods and plant procurement packages. Advance contracting allows the government to commence procurement activities, at its own risk, prior to signing of the loan agreement.

42. **Retroactive financing.** Retroactive financing was granted but not pursued for the current project (L3527-UZB). For the additional financing, the maximum amount of eligible expenditures for retroactive financing is \$19.2 million, the equivalent of 20% of the ADB loan, incurred before loan effectiveness, but not more than 12 months before the signing of the loan agreement. This is envisaged for the procurement of plant for traction substations and transformers, signaling and telecom and installation of SCADA, and video surveillance system; goods for machinery and equipment for railway maintenance; plant for the train management system at CTC; and project implementation and supervision consultants.

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

### **1. Loan 3527-UZB.**

43. For the current project, all procurement of plant, goods and works are being undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time).

44. Procurement consists of six packages, namely:

- P01: A plant (design-procure-construct) package with three lots, covering (i) transformer sub-stations, section posts, catenary systems and, (ii) signaling, telecommunication, and (iii) SCADA;
- P02: A goods package on external power supply;
- P03: A goods package to cover maintenance machinery/equipment; and
- P04: A goods package to cover contact system supply.
- P05: A goods package for procurement for machines for railway maintenance, with two lots, namely (i) track leveling, tamping and lining machine, and (ii) railway car, railway motor car for contact system maintenance.
- P06: A goods package for equipment and material for contact system.

45. International competitive bidding applies to all six packages. ADB's standard bidding documents (latest edition) are being used.

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

47. A consultant firm for engineering and works supervision has been recruited under the loan, according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time),<sup>10</sup> based on the terms of reference as detailed in Appendix 1, and selected using the quality- and cost-based selection (QCBS) method with a quality-cost ratio of 80:20. The contract with the winning firm "Italferr" was entered into in October 2017. In March 2019, Supplementary Agreement No. 1 was issued to increase the scope of services. In May 2020, Supplementary Agreement No. 2 was issued to apply further minor change in the scope of services. The current contract stipulates 674 person-months (122 international, 191 national and 361 supporting) of consulting services to (i) facilitate project management and implementation, and (ii) strengthen

---

<sup>10</sup> Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

the institutional and operational capacity of the executing agency.

## **2. Additional Financing.**

48. For the additional financing, all procurement of plant, goods and works will be undertaken in accordance with ADB Policy and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time). ADB's standard bidding documents (latest edition) will be used.

49. Procurement consists of three packages, namely:

- AAX-01: Plant (design, supply, installation) for:
  - a. Lot 1: Traction substations and transformers
  - b. Lot 2: Signaling, telecommunications and installation of SCADA
  - c. Lot 3: Video surveillance system
- AAX-02: Goods for machinery and equipment for railway maintenance with:
  - a. Lot 1: Draisines for catenary
  - b. Lot 2: Draisine for signaling and telecom
  - c. Lot 3: Road cars for catenary, transformer, etc.
  - d. Lot 4: Equipment for Kokand depot
- AAX-03: Plant (design, supply, installation) for the train management system at CTC.

50. For the traction substations, signaling and telecom, and video surveillance, it was assessed that the greatest level of competition would be obtained by grouping these components into one package with three lots. This would also reduce transactional costs of the PIU in conducting multiple tenders. For the train management system (Angren-Pap-Kokand-Andijan section), a different approach was adopted since this system will need to be seamlessly interfaced with a similar system currently under development (Pap-Namangan-Andijan section): for this reason, this component will be awarded on direct contracting basis to the incumbent firm working to install the equivalent system on this latter section.

51. An 18-month procurement plan indicating procurement methods and review procedures for goods, works, and consulting service contract packages is in Section D.

52. A consultant firm for engineering and works supervision will be recruited under the loan according to ADB Policy and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time),<sup>11</sup> based on the terms of reference for as detailed in Appendix 2, and selected using the quality- and cost-based selection (QCBS) method with a quality–cost ratio of 90:10.

---

<sup>11</sup> Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: <http://www.adb.org/documents/handbooks/project-implementation/>.

## D. Procurement Plans

### PROCUREMENT PLAN FOR LOAN 3527

<b>Project Name:</b> Central Asia Regional Economic Cooperation Corridor 2 (Pap-Namangan-Andijan) Railway Electrification Project	
<b>Project Number:</b> 48025-003	<b>Approval Number:</b> 3527
<b>Country:</b> Uzbekistan	<b>Executing Agency:</b> O'zbekiston Temir Yo'llari
<b>Project Procurement Classification:</b> Category B	<b>Implementing Agency:</b> Project Implementation Unit for Electrification and Renewal of Rolling Stock, UTY. (Implementing Agency)
<b>Project Procurement Risk:</b> Medium	
<b>Project Financing Amount:</b> US\$ 177,450,000 <b>ADB Financing:</b> US\$ 80,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> US\$ 97,450,000	<b>Project Closing Date:</b> 31 December 2021
<b>Date of First Procurement Plan:</b> 21 April 2017	<b>Date of this Procurement Plan:</b> 7 October 2019
<b>Advance Contracting:</b> Yes	<b>e-GP:</b> No

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

### 1. Procurement and Consulting Methods and Thresholds

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

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding for Goods	US\$ 2,000,000 and Above	
International Competitive Bidding for Works	US\$ 5,000,000 and Above	

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

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

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

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

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

The following table lists consulting services contracts for which the recruitment activity is

either ongoing or expected to commence within the next 18 months.

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

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

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

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

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

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

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

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

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

#### C. List of Awarded and On-going, and Completed Contracts

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

##### 1. Awarded and Ongoing Contracts

Goods and Works							
Package No.	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
P01	Procurement of Plant	[This information was deemed confidential according to paragraph 17]		ICB	Q3 / 2018	23-NOV-18	Contracts for 3 lots were signed on 7 Jan 2019.

Goods and Works							
Package No.	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
	Lot1: Traction Substations	(viii) of ADB's Access to Information Policy (2018).]		ICB	Q3 / 2018	23-NOV-18	Awarded to O'zelektroapparat-Electroshield
	Lot 2: Signaling and Telecommunications			ICB	Q3 / 2018	23-NOV-18	Awarded to Temirzhol Zhondeu LLP
	Lot 3: SCADA			ICB	Q3 / 2018	23-NOV-18	Awarded to CNTIC-EEB Consortium
P02	External Power Supply (rebid 01)			ICB	Q3 / 2018	28-NOV-18	Awarded to O'zelektroapparat-Electroshield
P03	Machinery/Equipment			ICB	Q1 / 2017	13-JUN-17	Awarded to Societe Des Anciens Etablissements L. Geismar. Contract was signed on 20 Sep 2017. Through a supplementary agreement, 1 unit of breakdown lorry for maintenance of contact system was procured.
P04	Contact System Supply			ICB	Q4 / 2017	17-JAN-18	Awarded to JV "Binokor Temir-Beton Servis" LLC. Contract was signed on 18 Jan 2018.
P05	Procurement of machines for railway maintenance			Prior	Q2 / 2019	22-JUL-19	
	Lot 1: Track Leveling, Tamping and Lining Machine			Prior	Q2 / 2019	22-JUL-19	Awarded to Consortium of Infratrade SCSp and Plasser Service Kazakhstan
	Lot 2: Railway car / Railway Motor Car for Contact System Maintenance			Prior	Q2 / 2019	22-JUL-19	Awarded to Geismar S.A.S.
P06	Equipment and material for contact system			Prior	Q2 / 2019	21-JUN-19	Awarded to China Railway Elec Eng Group Co.Ltd.

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



C01	Engineering and Works Supervision	[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]	QCBS	Q1 / 2017	23-OCT-17	Awarded to Italferr S.p.A. jointly JV with Tecnic Consulting Engineers. Contract was signed on 25 Oct 2017. Through a supplementary agreement, additional consultants were engaged.
-----	-----------------------------------	---	------	-----------	-----------	---

#### D. Non-ADB Financing

The following table lists goods, works and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments
Associated Civil Works, Installation	41,270,000.00	2	ICB	Procurement method - government procedures; number of contracts - several; financed 100% by UTY and government

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Comments
None				

## PROCUREMENT PLAN FOR ADDITIONAL FINANCING

### Basic Data

<b>Project Name:</b> CAREC Corridor 2 (Pap-Namangan-Andijan) Railway Electrification Project – Additional Financing		
<b>Project Number:</b> 48025-004	<b>Approval Number:</b>	
<b>Country:</b> Uzbekistan	<b>Executing Agency:</b> O'zbekiston Temir Yo'llari (UTY)	
<b>Project Procurement Risk:</b> Medium	<b>Implementing Agency:</b> Project Implementation Unit for Electrification and Renewal of Rolling Stock, UTY	
<b>Project Financing Amount:</b> US\$ 164,000,000 <b>ADB Financing:</b> US\$ 121,000,000 <b>Cofinancing (ADB Administered):</b> <b>Non-ADB Financing:</b> US\$ 43,000,000	<b>Project Closing Date:</b> 31 December 2024	
<b>Date of First Procurement Plan:</b> 20 April 2020	<b>Date of this Procurement Plan:</b> 23 September 2020	
<b>Procurement Plan Duration (in months):</b> 18	<b>Advance Contracting:</b> Yes	<b>e-GP:</b> No

### A. Methods, Review and Procurement Plan

Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, and consulting services.

Procurement of Goods and Works	
Method	Comments
Open Competitive Bidding (OCB) for Goods	With international advertising for Goods and Plant (Design, Supply and Installation)
Direct Contracting for Goods	For the plant contract for the train management system at the central train control center
Others for Goods	For Non-ADB financing, the procurement method is either National Competitive Bidding or Direct Contracting

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection for Consulting Firm	International expertise will be required for consultancy contract

### B. Lists of Active Procurement Packages (Contracts)

The following table lists goods, works, non-consulting and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan duration.

Goods and Works							
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date (quarter/year)	Comments
AAX-01	Plant (Design, Supply, Installation)  Lot 1: Traction Substations and	[This information was deemed confidential according to paragraph 17 (viii) of ADB's	OCB	Prior	1S1E	Q4 / 2020	Non-Consulting Services: No  Advertising: International

	transformers  Lot 2: Signaling and Telecom and installation of SCADA  Lot 3: Video Surveillance system	Access to Information Policy (2018).]					No. of Contracts: 3  Prequalification of Bidders: No  Domestic Preference Applicable: No  Bidding Document: Plant  High Risk Contract: No  Comments: Advance contracting
AAX-02	Goods Machinery and equipment for railway maintenance  Lot 1: Draisines for catenary  Lot 2: Draisines for signaling and telecom  Lot 3: Road cars for catenary, transformers, etc.  Lot 4: Equipment for Depot		OCB	Prior	1S1E	Q4 / 2020	Non-Consulting Services: No  Advertising: International  No. of Contracts: 4  Prequalification of Bidders: No  Domestic Preference Applicable: No  Bidding Document: Goods  High Risk Contract: No  Comments: Advance contracting
AAX-03	Plant (Design, Supply, Installation) Train management system at CTC		DC	Prior		Q2 / 2021	Non-Consulting Services: No  No. Of Contracts: 1  High Risk Contract: Yes

Consulting Services							
Package Number	General Description	Estimated Value (in US\$)	Selection Method	Review	Type of Proposal	Advertisement Date (quarter/year)	Comments
AAX-04	Engineering and Works Supervision Consultants	[This information was deemed confidential according to paragraph 17 (viii) of ADB's Access to Information Policy (2018).]	QCBS	Prior	FTP	Q3 / 2020	Non-Consulting Services: No  Type: Firm  Assignment: International  Quality-Cost Ratio: 90:10  Comments: Prequalification of bidder: Yes; Domestic Preference: No; Advance contracting.

### C. List of Indicative Packages (Contracts) Required Under the Project

The following table lists goods, works, non-consulting and consulting services contracts for which procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan duration).

Goods and Works						
Package Number	General Description	Estimated Value (in US\$)	Procurement Method	Review	Bidding Procedure	Comments
None						

Consulting Services						
Package Number	General Description	Estimated Value (in US\$)	Selection Method	Review	Type of Proposal	Comments
None						

### D. Non-ADB Financing

The following table lists goods, works, non-consulting and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments
Installation works	9,500,000.00	4	Others	Financed by UTY

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Comments
None				

## **E. Consultants' Terms of Reference**

53. Consultancy services are required for both the current and additional financing project. Their terms of reference are in Appendices 1 and 2 respectively.

## VII. SAFEGUARDS

54. **Introduction.** The UTY through the PIU-ET will ensure that all safeguard requirements prescribed in IEE and LARP are implemented.

55. The current project, in accordance to ADB SPS 2009, is categorized as “B” category for Environment, “B” category for Involuntary Resettlement, and “C” category for Indigenous Peoples. The following documents guide the implementation of safeguard actions:

- (i) **Environment.** An Initial Environmental Examination (IEE) including three Environmental Management Plans (EMPs), EMP1 to cover the electrification of the railway line, EMP2 to cover the external power supply transmission line, and EMP3 to cover the traction substations. The IEE also includes due diligence assessment and corrective action plans (CAPs) for the associated and existing facilities which will be funded by UTY and are not included in the project scope.
- (ii) **Resettlement.** A Draft Land Acquisition and Resettlement Plan (LARP) was prepared during project preparation, which is now being further developed into three implementableLARPs, LARP1 to cover the electrification of the railway line, LARP2 to cover the external power supply, and LARP 3 to cover the traction substations. A Social Due Diligence (SDD) report was also developed for the aforementioned associated/existing facilities, which includes a Corrective Action Plan (CAP).

56. The additional financing project, in accordance to ADB SPS 2009, is categorized as “B” category for Environment, “B” category for Involuntary Resettlement, and “C” category for Indigenous Peoples. The following documents guide the implementation of safeguard actions:

- (i) **Environment.** Initial Environmental Examination (IEE) including one Environmental Management Plans (EMP), to cover all relevant components of the project, including construction and upgrade of traction substations, as well as installation of signaling, telecommunication and video surveillance system. The IEE also includes due diligence assessment and corrective action plans (CAPs) for the associated and existing facilities which will be funded by UTY and are not included in the project scope.
- (ii) **Resettlement.** There will be no additional land acquisition and resettlement arising from the project. Hence, no LARPs are required under the project. A Social Due Diligence Report (SDDR) was developed, which includes a Corrective Action Plan (CAP) summarizing the need for UTY to (i) complete outstanding cash compensation to three (3) affected persons (AP) on the associated/existing facilities based on national legislation, (ii) provide support to severely affected farmers/households, (iii) expand the grievance redress mechanism (GRM) to cover the scope of the additional financing, (iv) strengthen information disclosure and stakeholder engagement, and (v) conduct monitoring throughout the project implementation.

57. **Prohibited investment activities.** Pursuant to ADB’s Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).

## **A. Environment**

58. Impacts from the overall project are expected to be limited in magnitude and a short-time nature during construction, mostly related to operation phase. The main concerns includes impact of electromagnetic fields (EMF) from catenary and external power supply transmission lines; railway and electric shock safety; change in the level of noise and vibration due to the increased speed and frequency of train movement. Environmental impacts during construction phase will be related to dust emissions, noise and waste generation, and occupational and community health and safety related to equipment replacement and facility improvement; installation works of electric polls/catenary for the main track and the 6.7km new by-pass alignment, construction of the two traction substations. Adverse impacts mainly related with occupational and community health and safety are envisaged during the operation phase.

59. The PIU-ET at UTY will be responsible for implementation of the EMPs to comply with ADB's safeguards requirements and environmental national regulations. For this, PIU-E will maintain a qualified full-time environmental and social safeguard staff who will be assisted by the environmental specialists of the Engineering Consultants (EC) in overseeing the implementation of EMP. The cost for implementing EMP will be included in the construction contracts, and the cost for environmental supervision will be included in the consulting service of the ECs, the cost for environmental instrumental monitoring, capacity building for environmental management and railway safety will be included in PIU-ET budget. PIU-ET is responsible for overall environmental compliance with SPS 2009. A grievance redress mechanism to handle both environmental and social safeguard issues has been established for the current project, after the project effectivity.

60. UTY is responsible for CAP implementation using UTY own resources. It is mandatory that ZVOS (Uzbekistan EIA) be prepared and relevant approvals be obtained from Glavgosecoexpertiza of Goskompriroda prior to the commencement of the project activities.

61. EMPs will form part of the bidding documents. To ensure that mitigation actions are implemented in accordance with the requirements of the EMPs, monitoring shall be undertaken as follows:

- Instrumental Monitoring for environmental quality such as air, noise, vibration, water – This shall be performed monthly by a certified laboratory of Sanitarian Epidemiological Station which is affiliated entities of UTY. Schedules, parameters, locations are indicated by the project EMP and shall be endorsed by the EC.
- Observational Monitoring – Throughout the construction phase the EC shall continually monitor the Contractors in both ADB and UTY-funded activities. This will be achieved through weekly inspections of the Contractors environmental performance by EC's national environmental specialist. EC shall have the right to suspend works or payments if the Contractor is in violation of any of his obligations under the EMP and SSEMPs.

62. Contractors will be responsible for implementing mitigation measures. Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental Management plans (SSEMPs) will be developed by the Contractors under the guidance of the EC, and be endorsed by EC before submission to PMU for approval. SSEMP is the document that the Contractors shall prepare outlining how he intends to implement the EMP at a specific site or for a specific issue to ensure that all mitigations are implemented as specified in the EMP. SSEMPs will be needed for major environmental issues and most critical sites relating to sensitive receptors. During construction, the Contractors must retain the expertise of a full-time

Environmental Officer (EO) to implement and continually update the SSEMPs, and to report on the implementation of mitigation measures throughout the contract period.

63. The EC is tasked with specific responsibility to assist PIU-ET in ensuring safeguard compliance of civil works – with particular emphasis on the monitoring of implementation of EMP through the SSEMPs and related aspects of the project. EC shall mobilize a national environmental specialist (NES) to ensure that the Contractor is compliant with his environmental obligations. It is required that the NES provides a short training program to the PIU-ET safeguard person and Contractors EO prior to the start of construction to develop their knowledge and understanding of the environmental, social, health and safety aspects of the project. TORs for NES can be found in the EC contract.

64. PIU-ET is responsible for overall EMP implementation and will be assisted by the ECs. The PIU's responsibilities include the following, but not limited to:

- Implement the EMP developed within the IEE, follow up with UTY on CAPs for associated and existing facilities;
- Ensure the bidding documents of EC and Contractors include all tasks as described in the approved EMP;
- Supervise the EC and Contractors in EMP implementation for overall compliance with SPS 2009 requirements and project environment-related legal covenants;
- Ensure all necessary government permits and license, including ecological expertise opinion, for all civil works will be obtained;
- Approve SSEMPs which will be prepared by the Contractors and endorsed by the EC;
- With assistance of the EC, prepare, submit to the EA and ADB, and disclose semi-annual environmental monitoring reports on ADB website and in UZB;
- Report in a timely manner to ADB of any non-compliance or breaches with ADB safeguard requirements and take corrective actions promptly;
- Update the IEE in case of technical design changes or unanticipated impacts;
- Establish a Grievance Redress Mechanism (GRM) after the project effectivity and act as the GRM secretary to make sure that the GRM is operational to effectively handle environmental and social concerns of project affected persons;
- Build up and sustain institutional capacity in environmental management and railway safety, including conducting public awareness programs

65. State Nature Protection Committee through its branches in Namangan, Andijan and Kokand provinces will be also involved in the process of project implementation and the railway operation. Provincial Nature Protection Committee will review local Environmental Assessment (ZVOS) and provide approval as appropriate. Moreover, requirements indicated in Environmental Appraisal will be mandatory for implementation and it will be monitored by inspectors from district branches of Nature Protection Committee. Representatives of the Committee will also participate into the hand-over process as member of State Acceptance Commission. The Provincial Nature Protection Committee will receive the project's semi-annual environmental monitoring reports from the PIU.

## **B. Resettlement**

66. The land acquisition and resettlement impacts are estimated to be limited in this overall project. The UTY, through its PIU, will ensure that land acquisition will be carried out in



accordance with ADB's SPS (2009), and applicable laws and regulations in Uzbekistan that have been referred to in the LARP.

67. For the current project, the PIU-ET will ensure that LARP will be implemented and its implementation monitored to ensure that no affected people will suffer by unattended impacts associated with land acquisition. Based on a conceptual design, the draft LARP indicated that a total of 10.84 hectares of land will be acquired permanently for the project, comprising 114 land parcels and as many land owners. Approximately 24 house structures as well as 4388 trees will be affected. Upon completion of the detailed design, a detailed measurement survey is required to be done comprising a census and assets inventory of the affected persons, leading to preparing three implementable LARPs for (i) the external power supply, and (ii) electrification and (iii) 2 traction substations. For implementing these LARPs, the PIU-ET will ensure that:

- (i) A qualified full-time environmental and social safeguard staff is recruited as part of the PIU-ET team to implement the LARPs and address complaint related with compensation, if any.
- (ii) It will develop three implementable LARPs and carry out adequate consultation with affected people. However, no change should be made on the entitlement matrix of the draft LARP that provided clear guidance on entitlements for compensation.
- (iii) The implementable LARPs have to be submitted to ADB for concurrence prior to implementation, and have to be prepared as early as possible after detailed design is available.
- (iv) The implementable LARPs will be disclosed through ADB's website and the PIU-ET will be responsible to disclose relevant information from the LARPs to the affected people. The awarding of civil works contract will be done only after the affected households receive full payment of compensation, and a report on full payment of compensation shall be submitted to ADB. The advance payment to the contractor can only be released by ADB after the report on full compensation payment is received by ADB. Meantime, the final LARPs can be implemented on sub-section by sub-section basis; so that for the LAR-completed sections notice to proceed can be given as compensation payment is made. The sub-sections shall be defined by final LARPs with clear indication of chainage, length of each section and mileage. During the definition of sub-sections, not only the engineering aspect, but also the safety of local population who live near the end point of the sub sections, volume of works for the contractor and site management arrangement aspects should be taken into account. The sub-sections can be refined during the implementation based on progress, which should be clearly reflected in LARPs implementation monitoring reports. Change of the sub-sections requires prior concurrence from ADB before any decision is made. Change of sub-sections during the implementation should be limited only to exceptional cases.
- (v) ADB will also approve section-wise notice to proceed on sections which are free from LAR impacts points of view. For such cases, Social Due Diligence Reports shall be prepared for such section(s) by PIU-ET with clear indication of absence of LAR impacts and attached supporting documents. Only after the approval of SDDR (s) by ADB, notice to proceed on those sections can be given.
- (vi) Reports on monitoring the implementation of LARPs, including any grievances, will be submitted to ADB on a semi-annual basis.
- (vii) The PIU-ET will also record any unanticipated impacts due to land acquisition and take necessary mitigation measures in accordance with the provisions described in the LARPs.

68. **Existing/Associated Facilities.** In association with the current project, a small section of the electrification (6.7km) will be over tracks that was constructed by the government to bypass the existing tracks travelling through neighboring Kyrgyz Republic. The construction of this bypass is outside the scope of the current project and was conducted by the government and UTY regardless of ADB financing for the electrification project. The government and UTY confirmed that the bypass construction was initiated without anticipation of ADB financing the project. The bypass is therefore considered an associated facility which is not funded as part of the project but essential for or dependent on the project. There is also an existing facility outside of the project scope, comprising the building and maintenance activities at the Andijan Depot.

69. In association with the additional financing, external power supply lines have been installed by own funds of the government, linking the two new traction substations to be built at Asaka and Kokand, with the power grid. Furthermore, the land for the two new traction substations were acquired not in anticipation of the ADB financing. These components will therefore be treated as associated/existing facilities.

70. For the associated and existing facilities which are out of the project scope, ADB's SPS requires assessment of impacts and risks to the project. A social due diligence/audit has therefore been conducted for the additional financing project, and corrective actions developed from the involuntary resettlement point of view.<sup>12</sup> All the corrective actions, including the expansion and improvement of its grievance redress mechanism, will be implemented and monitored by UTY. UTY/PIU-ET will provide to ADB, semi-annual monitoring reports on the implementation of the CAP and any LAR-related issues that may emerge and additional corrective actions that may be required during the implementation of the project. UTY will ensure that no physical and economic displacement will occur until compensation and assistance is paid to the affected persons prior to construction.

71. **Grievance Redress Mechanism.** UTY has established a grievance redress mechanism under the current project, and this will be expanded to cover the components under the additional financing. A two-level project specific grievance redress mechanism is in place, namely (i) Level-1 (any railway station within the scope of the current and additional financing project), and (ii) Level-2 (UTY's secretariat in Tashkent). As a third mechanism, aggrieved persons can approach any competent court at any stage of the complaint. PIU-ET will ensure that grievances and complaints on any aspect of the land acquisition, compensation, and resettlement are addressed in a timely and satisfactory manner through the GRM. UTY through the PIU-ET and ECs will ensure that meaningful consultations are carried out with the APs throughout the project cycle with particular attention to the needs of the vulnerable and the disadvantaged groups. The project level grievance mechanism shall not impede an aggrieved person's access to the country's judicial or administrative remedies. The aggrieved persons can approach a court of law at any time and independent of the project level grievance redress process. UTY and its PIU-ET will keep records of complaints received for its use and monitoring as well as for review by ADB during regular supervision missions. The GRM was presented at the project preparation stage to the communities during public consultations. However all the relevant information on the GRM will be disseminated via the LARP information leaflet/brochure that will be distributed to affected persons. The project information will be disseminated through the disclosure of the LARP and the social

---

<sup>12</sup> ADB. 2013. Safeguard Review Procedures. *Operations Manual*. OM F1/OP. Manila (para. 39 and footnote 14). discusses this issue as a risk and requires collaboration to achieve the outcomes consistent with ADB requirements on a case-by-case basis. The implementation of the corrective action plan has been agreed between ADB and UTY, and is included in the legal covenants.

due diligence report to the ADB and UTY websites. LARP related information leaflets/ brochures in local language will be distributed to the affected persons. All relevant information in local language will also be made available at the district level.

72. UTY through the PIU-ET and ECs will ensure that meaningful consultations are carried out with the APs throughout the project cycle with particular attention to the needs of the vulnerable and the disadvantaged groups.

### **C. Indigenous Peoples**

73. The country does not have indigenous people's communities as defined in the SPS for operational purposes. As such, the project is classified as C for indigenous peoples safeguard and no further action is required.

## **VIII. GENDER AND SOCIAL DIMENSIONS**

74. The lack of access to safe and affordable transport significantly hinders the social and economic development of rural households as well as industrial and agricultural sectors. A social and poverty assessment ascertained that the overall project will contribute to reducing transport cost and travel time, ensure safety, and increase access to jobs, markets, healthcare and education facilities for the local population. The primary beneficiaries will be passengers (especially the university community, which is presently the primary user of the railway), freight transporters and agro-industrial producers. It is also expected that new employment will be created during the implementation and operation stage. Women and children will have access to safe transport, with gender-inclusive facilities in trains and at modernized stations. Currently, women and children face unsafe and crowded travel conditions through the use of informal taxis and vans. Electrification of the railway will increase the opportunities of tourism development in the Fergana Valley. This will also contribute to the creation of new jobs in the tourism sector, which is traditionally occupied by women.

75. The current project will support measures to mitigate any potential negative social impacts that may arise, particularly on operational safety of the electrified railway. A specific project output will help improve operational safety through (i) conducting an assessment of the existing and anticipated safety situation for the general public including women and children, (ii) supporting the development of practical countermeasures, and (iii) training staff (inclusive of female staff) to plan future railway developments in the safest manner.

76. The additional financing will further support the empowerment of women employees of UTY, by extending training on modernized signaling and train management systems.

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

### A. Revised Design and Monitoring Framework

The revised design and monitoring framework strikes out content for deletion and underlines content to be added.

Impacts the Project is Aligned with Stimulated economic growth in the Fergana Valley <sup>a</sup> Improved connectivity and increased regional trade along CAREC Corridor 2 (CAREC Transport and Trade Facilitation Strategy 2020) <sup>b</sup>			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<b>Outcome</b> Level of <u>rail</u> passenger and freight service <del>on the Pap–Namangan–Andijan railway line</del> <u>in, to, and from the Fergana Valley</u> improved	By <del>2022–2025</del> : a. Travel time for passengers from Namangan to Tashkent reduced to 3 hours (2016 baseline: 5 hours by car) b. Average running speed for freight trains <u>in the Fergana Valley</u> increased to 80 km/h (2016 baseline: 60 km/h) c. CO <sub>2</sub> emissions reduced by <del>40,000</del> <u>24,870</u> tons per year (2016 baseline: none) (OP 3.1)	a–b. UTY annual report  c. Project completion report	<u>R: Competition from road transport reduces uptake of railway services.</u>
<b>Outputs</b> 1. Railway infrastructure along the Pap–Namangan–Andijan line upgraded	By 2021: 1a. 145.1 km <u>of</u> railway line in Pap–Namangan–Andijan electrified <u>(2016 baseline: 0 km) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</u> 1b. Two traction substations and dispatcher points constructed <u>(2016 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</u> 1c. Equipment and machinery for maintenance operational <u>(2016 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</u> 1d. Signaling and communications facilities modernized <u>(2016 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</u> 1e. External power supply facilities constructed <u>(2016 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</u>	1a–e. UTY's project progress reports and project completion report	<u>R: Escalation of COVID-19 globally and across Uzbekistan reduces the pace of project implementation.</u>  <u>R: Changes in government's tax payment procedures may challenge timely payments.</u>  <u>R: Multiple layers of review and approving authorities, lengthy procedures to register a contract, and verification of contract prices may delay procurement and implementation.</u>

2. Safety of railway operations improved	<p>By 2021:</p> <p>2a. Action plan to enhance the safety of railway operations in the Fergana Valley, which considers the special needs of children and women, approved by UTY management (2016 baseline: 0) (OP 6.2)</p> <p>2b. At least 20 UTY staff members, including all relevant female technical staff, trained on safe railway operations (2016 baseline: 0) (OP 2.1.1, 6.2)</p>	2a–b. UTY’s project progress reports and project completion report	
3. Railway infrastructure along the Angren-Pap-Kokand-Andijan line upgraded	<p>By 2024:</p> <p>3a. Two traction substations constructed, four traction substations upgraded, and two sectioning posts constructed (2020 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</p> <p>3b. Signaling facilities installed on 441 km of track. (2020 baseline: 0 km) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</p> <p>3c. Telecommunication facilities installed on 474.3 km of track (2020 baseline: 0 km) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)<sup>c</sup></p> <p>3d. At least 200 staff, including 20 female technical staff, trained on telecommunication and signaling system (2020 baseline: 0) (OP 2.1.1, 6.2)</p> <p>3e. Equipment and machinery for maintenance operational (2020 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1)</p>	3a–e. UTY’s project progress reports and project completion report	
4. Train control and management system upgraded	<p>By 2023:</p> <p>4a. Central train control center in Tashkent modernized (2020 baseline: 0) (OP 1.3.1, 3.1.1, 3.1.3, 3.3.1, 7.1.1)</p> <p>4b. Automated system for scheduling operational</p>	4a–c. UTY’s project progress reports and project completion report	

	<p>(2020 baseline: 0) (OP 6.2)</p> <p>4c. At least 30 staff, including 10 female technical staff, trained on train management system (2020 baseline: 0) (OP 2.1.1, 6.2)</p>	
--	---	--

### Key Activities with Milestones

- 1. Railway infrastructure along the Pap–Namangan–Andijan line upgraded**
  - 1.1 Overhead power lines, traction substations, and external power supply facilities designed, installed, and commissioned by ~~Q2–Q4~~ 2020 (delayed).
  - 1.2 Signaling and communications facilities supplied, installed, and commissioned by Q4 2020 (on track).
- 2. Safety of railway operations improved**
  - 2.1 Detailed assessment of the operational safety of the Pap–Namangan–Andijan railway conducted by ~~Q3–2019~~ Q4 2020 (delayed).
  - 2.2 Action plan to enhance railway operations for the general public in the Fergana Valley developed by ~~Q4–2019~~ Q4 2020 (delayed).
  - 2.3 Training of UTY staff on safe railway operations conducted by ~~Q4–2019~~ Q4 2020 (delayed).
- 3. Railway infrastructure along the Angren–Pap–Kokand–Andijan line upgraded**
  - 3.1 Traction substations, section posts, signaling, and telecoms designed, installed, and commissioned by Q2 2024.
  - 3.2 Maintenance machinery and equipment supplied, installed, and commissioned by Q3 2024.
- 4. Train control and management system upgraded**
  - 4.1 Needs assessment for train control and automated train scheduling completed by Q1 2021.
  - 4.2 Automated train scheduling and management designed, installed and commissioned by Q2 2024.
  - 4.3 Training on train scheduling and management completed by Q3 2024.

### Project Management Activities

[For current project]

Requests for proposals for project management and construction supervision consultants launched by Q1 2017 and contracts awarded by Q3 ~~Q4~~ 2017 (completed).

Major procurement packages bid out in Q2 2017 and contracts awarded by Q1 ~~2018~~ 2019 (completed).

Additional procurement for maintenance machinery and equipment, as well as equipment and materials for contact systems are bid out in Q2 2019 and awarded by Q4 2019 (completed).

[For additional financing]

Major procurement packages bid out by Q4 2020 and contracts awarded by Q2 2021.

### Inputs

ADB: ~~\$80.00 million~~ \$201.00 million (\$121.00 million additional) (ordinary capital resources, regular loan)

Government and UTY: ~~\$97.45 million~~ \$140.45 million (\$43.00 million additional)

ADB = Asian Development Bank, CAREC = Central Asia Regional Economic Cooperation, CO<sub>2</sub> = carbon dioxide, DMF = design and monitoring framework, COVID-19 = coronavirus disease 2019, km = kilometer, km/h = kilometers per hour, OP = operational priority, Q = quarter, R = risk, UTY = O'zbekiston Temir Yo'llari.

<sup>a</sup> Defined by project.

<sup>b</sup> ADB. 2014. *CAREC Transport and Trade Facilitation Strategy 2020*. Manila.

<sup>c</sup> Includes 441 km of track as per indicator 3b and an additional 33.3 km of track with only telecommunications.

Source: Asian Development Bank.

### Contribution to Strategy 2030 Operational Priorities

Note: The expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2 of the Report and Recommendation of the President).

Source: Asian Development Bank.

## B. Monitoring

77. **Project performance monitoring.** UTY and ADB will monitor the overall performance of the project through the project performance monitoring system (PPMS) and project performance reporting (PPR) system,<sup>13</sup> respectively. UTY will establish PPMS, within 6 months from project commencement, and collect and update baseline data for performance monitoring. The key indicators and targets, assumptions, and risks outlined at the impact, outcome, and output levels in the project's design and monitoring framework (DMF) will be the primary data required for analysis. For this purpose, ADB's inception mission will provide UTY a checklist of the above data in a word file, which will be updated (in track changes) and reported quarterly through UTY's quarterly progress reports and after each ADB review mission. These quarterly reports will provide information to regularly update ADB's PPR system. UTY will involve the beneficiaries in the collection of data on impacts and outcomes. During each review mission, the updated project performance will be shared with the interested representatives of project beneficiaries

78. **Compliance monitoring.** Compliance to the covenants will be jointly monitored by UTY and ADB through monthly and semi-annual updates provided by the engineering and construction supervision consultants. The consultants will submit to ADB a status report on the covenants with the explanation and time-bound actions on partly or non-complied covenants. ADB's resident mission in Tashkent will hold semi-annual review meetings with UTY to ensure the full compliance of the covenants.

### 79. Safeguards monitoring

- **Environment.** Instrumental Monitoring for environmental quality such as air, noise, vibration, water will be performed monthly by a certified laboratory of Sanitarian Epidemiological Station which is affiliated entities of UTY. Schedules, parameters, locations are indicated by the project EMP and shall be endorsed by the EC. The Contractor(s) EO is responsible for the preparation of weekly environmental checklists and environmental section in monthly progress reports that shall be submitted to the EC for review. Based on site inspection and Contractors' reports, the EC shall be responsible for preparing an environmental section in monthly and Quarterly project progress Reports to submit to PIU. The EC is also responsible for assisting PIU-ET in preparing semi-annual Environmental Monitoring Reports (EMRs) and final EMR including post-construction environmental audits.
- **Resettlement.** UTY will submit semi-annual resettlement monitoring reports to ADB which will broadly include; setting up of relevant institutions, status on land for land compensation especially finding the alternate land, land development in the alternate site, status on disbursement of compensation and assistance, number of consultations carried out, number of grievance recorded and redressed, status on progress of physical construction, difficulties (if any) found during the implementation of LARP and corrective actions under the social due diligence report for the 6.7km realignment section and further mitigation measures etc.

80. **Gender and social dimensions monitoring.** The EC mobilized under the project will support the improvement of operational safety of the railways. They will monitor and report on the implementation of countermeasures in favor of improved safety. Such countermeasures will take

---

<sup>13</sup> ADB's project performance reporting system is available at <http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>



into account the special safety needs of women and children, which may include (i) safety of crossing points frequented by women and children, and (ii) public campaigns tailored specifically to women and/or children.

81. **Financial Management Monitoring.** UTY and the government shall monitor progress against the Financial Management Action Plan. The government and UTY will report on an annual basis, the status of implementation of the new decree (to be passed by 30 June 2021) to (i) remove non-core businesses from UTY, and (ii) prevent UTY from acquiring noncore businesses in future. UTY and the government shall monitor and report to ADB on an annual basis that there are no new decisions by the government which will have reversed this decree.

## C. Evaluation

82. A project inception mission will be fielded soon after the loan agreement for the project is declared effective. Thereafter, regular reviews will follow at least annually. As necessary, special loan administration missions and a midterm review mission will be fielded, under which any changes in scope or implementation arrangement may be required to ensure achievement of project objectives. The PIU-ET will monitor project implementation in accordance with the schedule and time-bound milestones, and keep ADB informed of any significant deviations that may result in the milestones not being met. A project completion report will be submitted by PIU-ET within 6 months of physical completion of the project, providing detailed evaluation of the progress of implementation, costs, consultant performance, social and economic impact, and other details as requested by ADB.<sup>14</sup>

## D. Reporting

83. The UTY will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (iii) a project completion report within 6 months of physical completion of the project. In January and July every year, UTY will submit semi-annual environmental monitoring reports to ADB and relevant government authorities, and these reports will be disclosed to the public on the UTY's (in Uzbek or Russian) and ADB (in English) websites. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report should be adequately reviewed.

## E. Stakeholder Communication Strategy

Project Documents	Means of Communication	Responsible Party	Audience	Frequency
PDS	ADB's website	ADB	General Public	Initial PDS upon approval of the concept paper; subsequent PDS at least bi-annually or as necessary
IPSA	ADB's website	ADB	General Public, project-affected people in particular	Upon approval of the concept paper
IEE	ADB's website	ADB	General Public	Upon receipt by ADB

<sup>14</sup> Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

<b>Project Documents</b>	<b>Means of Communication</b>	<b>Responsible Party</b>	<b>Audience</b>	<b>Frequency</b>
DDR	ADB's website	ADB	General Public, project-affected people in particular	Upon receipt by ADB
Documents Produced under TRTA	ADB's website	ADB	General Public	Upon completion
RRP and linked documents	ADB's website	ADB	General Public	Upon approval by the Board
DMF	ADB's website	ADB	General Public	Upon approval of the RRP by the Board
PAM	ADB's website	ADB	General Public	Upon approval of the RRP by the Board; as necessary
LA and PA	ADB's website	ADB	General Public	Upon signing
Amendments to the LA and PA	ADB's website	ADB	General Public	Within 2 weeks of effectiveness
Social and Environmental Monitoring Reports	ADB's and UTY's website	ADB and UTY	General Public, project-affected people in particular	Semi-annually, to be disclosed upon receipt by ADB
Major Change in Scope	ADB's website	ADB	General Public	Upon approval of the change by the Board
APFS and Auditor's Opinion on the Financial Statements	ADB's website	ADB	General Public	As indicated in the loan agreement
PCR	ADB's website	ADB	General Public	Upon circulation to the Board for information
Independent Evaluation Reports	ADB's website	ADB	General Public	Upon circulation to Management and the Board, except for IED annual evaluation reports that will be posted on the ADB website upon discussion by the Board's Development Effectiveness Committee
Performance of the project with clearly defined information requirements and indicators, business opportunities, bidding process and guidelines, results of bidding process, and summary progress report of the project	UTY website	UTY	General Public	per project progress, no less than monthly

## X. ANTICORRUPTION POLICY

84. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.<sup>15</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 and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.<sup>16</sup>

85. To support these efforts, relevant provisions are included in the loan and project agreements as well as the bidding documents for the project. All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of UTY and PIU, and all contractors, suppliers, consultants, and other service providers as they relate to the project. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contract under the project.

86. ADB's Anticorruption Policy designates the Office of Anticorruption and Integrity as the point of contact to report allegations of fraud or corruption among ADB-financed projects or its staff. Office of Anticorruption and Integrity is responsible for all matters related to allegations of fraud and corruption. For a more detailed explanation refer to the Anticorruption Policy and Procedures. Anyone coming across evidence of corruption associated with the project may contact the Office of Anticorruption and Integrity by telephone, facsimile, mail, or email at the following numbers/addresses:

- by email at [integrity@adb.org](mailto:integrity@adb.org) or [anticorruption@adb.org](mailto:anticorruption@adb.org)
- by phone at +63 2 632 5004
- by fax to +6326362152
- by mail at the following address (**Please mark correspondence Strictly Confidential**):  
Office of Anticorruption and Integrity  
Asian Development Bank  
6 ADB Avenue  
Mandaluyong City 1550  
Metro Manila, Philippines

---

<sup>15</sup> Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>

<sup>16</sup> ADB's Office of Anticorruption and Integrity website: <https://www.adb.org/site/integrity/main>

## **XI. ACCOUNTABILITY MECHANISM**

87. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.<sup>17</sup>

---

<sup>17</sup> Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

## **XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL**

88. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.

**Table 9: Record of Changes to the Project Administration Manual**

<b>Version</b>	<b>Date</b>	<b>Revisions</b>
1: Pre fact-finding	21 October 2016	First draft of the PAM.
2: Fact-finding	26 November 2016	Second draft of the PAM
3: Post ADB internal review	31 January 2017	Third draft incorporating ADB reviewers' comments
4: Post ADB management review	19 February 2017	Fourth draft incorporating ADB management comments
5: Negotiated draft	10 March 2017	Fifth draft as confirmed at loan negotiations
6: Periodic update	02 April 2018	Sixth version incorporating minor changes to social and environmental safeguard design, and update to the procurement plan
7: Periodic update	26 March 2019	Seventh version incorporating minor changes as approved by ADB to use loan savings to finance additional goods and services, updates to the procurement plan and design and monitoring framework, and renaming of PIU-E to PIU-ET
8. Mid-term Review	27 September 2019	Eight version incorporating the changes as discussed and agreed at mid-term review.
9. Additional Financing fact-finding	19 June 2020	Ninth version incorporating the proposed additional financing.
10. SRM for Additional Financing	31 August 2020	Tenth version incorporating updates from interdepartmental review.
11. Loan negotiations for Additional Financing	23 September 2020	Eleventh version incorporating updates from loan negotiations for the additional financing.

## **TERMS OF REFERENCE FOR ENGINEERING AND CONSTRUCTION SUPERVISION CONSULTANTS (CURRENT PROJECT)**

### **General**

1. [this part of the TOR will specify the project background, rationale, impact, outcome, outputs, and implementation arrangements. This section has been omitted from this PAM to reduce overlap with other sections of the PAM]

### **Objectives**

2. The main objectives of the consulting services are to: (i) ensure that the procurement and implementation of electrification, signaling and telecommunications, track works and associated civil works under the project are carried out efficiently and in an economical manner, consistent with the widely accepted engineering standards and practices for such works, and to the satisfaction of UTY and ADB; and (ii) assist in the institutional strengthening of UTY by conducting an assessment of the existing and anticipated safety situation to the general public including children, supporting the development of practical countermeasures, and training of staff to plan future railway developments in the safest manner.

### **Scope of Services**

3. The tasks and responsibilities of the Engineering Consultant outlined in the paragraphs below shall be performed under the supervision of the PIU, which will oversee the day-to-day performance of the services, review submissions and deliverables, provide approval, as necessary, and report to the Government/UTY and ADB.

3.1 *Overall responsibility, design reviews and interfacing:* The Engineering Consultant shall:

- (i) Assist the Employer/PIU-ET in all technical and commercial matters relating to the project. Based on general technical state of the art and its related experience, the Engineering Consultant shall submit its observations and proposals exercising all reasonable skill, care and diligence in the discharge of duties and responsibilities under this terms of reference (TOR). The Engineering Consultant shall be responsible for the accuracy and completeness of the assigned tasks.
- (ii) Monitor all contracts for works, goods, and services for the project, which may be financed by ADB. The Employer may authorize the Engineering Consultant to act on its behalf. Such authorization shall be made in written form and be consistent with this TOR and the contract between the Employer and the Engineering Consultant.
- (iii) Coordinate closely with the PIU-ET in the performance of the services. In all matters relating to the project, the Engineering Consultant will report to the PIU-ET and ADB. Decisions on the Engineering Consultant's proposals will be the responsibility of the PIU.
- (iv) Coordinate with all those involved in the recently-completed works of electrification on the Pap – Angren/ Pap– Kokand–Andijan sections and ensure compatibility of designs and facilities as well as interfacing requirements for safe, efficient and economic operations on the Pap–Namangan–Andijan railway route. Equally, coordinate with all those involved in the operation of existing rolling stock, as well as procurement and commissioning of new rolling stock, to ensure full compatibility of schedules of supply, designs and facilities and other interfacing requirements.

- (v) Follow the laws, regulations and normative documents of the Republic of Uzbekistan.
  - (vi) Review the preliminary design and/or detailed design carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability and make recommendations and/or alternative proposals to meet the requirements of the project.
  - (vii) Considering that the project has various components and different types of works which will be implemented by various agencies/contractors and there are inter-dependencies, the Engineering Consultant shall review all aspects of interfacing of the project and its components including but not limited to (a) technical interface in the designs of various components and parts thereof; (b) interface between the systems on the project section and the systems outside the project section together with countermeasures required in the event that the equipment or facility on either of the sections should fail; (c) interfacing the scheduling of works and equipment installation jobs under the components and parts thereof; and (d) interfacing the implementation of works by one or more agencies/ contractors, so as to ensure that the requirements for sound implementation of the project and its safe and efficient operation have been adequately considered and provided for.
- 3.1.1 Engineering Consultant shall perform the following key tasks according to the Contract:
- Technical, commercial and in-time project realisation
  - Interface-Management
  - Construction supervision
  - Claim management
- 3.1.2 In detail, the Engineering Consultant shall assist in the following fields:
- Provide all necessary facilities to the work place (office).
  - Assist the PIU-ET throughout the bidding process to select the contractor(s) and/or supplier(s) and award the contract(s).
  - Examination and co-ordination of time schedules (construction, assembling, installation)
  - Preparation of cash flow plans
  - Realisation of interfaces between contracts for specific lots
  - Realisation of interfaces between the Employer and contractors/suppliers (the Employer's actions/decisions should be co-ordinated with works performed by the contractors in terms of organisation, technique and time)
  - Construction supervision (conformity with approved design, quality, functionality, safety, costs, bills of quantity)
  - Participation and approval of acceptance tests
  - Participation and acceptance in testing
  - Participation and acceptance in commissioning
  - Checking of project documentation (as-built plans, operational manuals, maintenance manuals)
  - Verification of claims (technical, financial, and impact on time of completion)
  - Assessing compliance with laws, rules, and standards
  - Issue of special approvals
  - Checking of completeness of deliveries, spare part management
  - Examination of warranty claims
  - Dispute arbitration

## 3.2 Procurement

3.2.1 Procurement of goods, plant and services financed under the ADB loan will follow international competitive bidding (ICB) procedures, in accordance with ADB's *Procurement Guidelines* (2015, as amended from time to time) and ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time). Works including remodeling of existing structures and/or construction of new buildings, track works, overhead catenary system which are scattered and/or require special arrangements for implementation under conditions of train operations on the project route will be procured in accordance with the government's procedures and be financed by UTY from its own resources. The contract packaging for procurement shall be based on the Procurement Plan approved by ADB. Currently it is envisaged that ICB procurement under the project would involve procurement of goods (materials and equipment) and plant - design, supply and install.

3.2.2 The scope of the Engineering Consultant's work includes the provision of assistance to PIU-ET during the pre-qualification, bidding, including invitation to bid, conducting pre-bid meetings and responding to bidders' requests for clarification and conducting site visits, bid evaluation and preparation of bid evaluation report, contract negotiations, preparing of draft contract and obtaining approval of Government/ ADB for award of contract.

3.2.3 The Engineering Consultant will assist the Employer/PIU-ET in all aspects of contract management up to the stage of completion and hand over of works to the Employer.

## 3.3 Supervision of Construction works

3.3.1 During the construction stage, the Engineering Consultant will provide supervision and oversight inspection of the construction contract(s). The scope of the construction supervision services includes carrying out contract administration; construction supervision; supervision of the quality assurance plan; monitoring of the environmental management plan; monitoring of the gender and the health and safety plans, monitoring of the HIV/AIDS and human trafficking awareness plans, review of project performance indicators; a project performance baseline study and social assessments; and a completion of a performance monitoring report at the end of construction.

3.3.2 Upon authorization by the Employer in written form, the Engineering Consultant will perform and be responsible for the duties of the project Manager as defined in the General Conditions of Contract (see ADB's Standard Bidding Document for plant) The Engineering Consultants will, in their proposal, nominate a senior officer of the company who will represent the company throughout the assignment. This senior officer will not be separately remunerated under the consultancy agreement, his/her remuneration shall be deemed to be included in the Engineering Consultant's overhead.

3.3.3 During tendering the Engineering Consultant shall review the safety plans submitted by the bidders for assuring safety during construction. If necessary, the Consultant may require the bidders to submit further details from the point of view of securing safety during construction. During the supervision of the construction work, the Engineering Consultant shall confirm that an accident prevention officer proposed by the contractor is duly assigned at the project site and that the construction work is carried out according to the safety plan as well as the safety measures detailed in the program.



3.3.4 The Engineering Consultant shall assist the Employer with the following tasks:

- (i) Assist the Employer with regard to the execution of the works within the project schedule, budget, quality and safety requirements, and in compliance with: (a) technical specifications; (b) quality requirements; (c) appropriate local and international standards and regulations; (d) working drawings; installation drawings; and (e) construction safety rules.
- (ii) Ensure that the construction methods proposed by the contractor for carrying out the works are satisfactory. Inspect contractor's construction equipment, results of material tests, safety of the works, property and personnel;
- (iii) Review the contractor's(s') final designs, design calculations and working drawings for compliance with the project's requirements, and provide comments and recommendations as appropriate.
- (iv) Establish efficient procedures for verifying contractor performance and reporting progress and problems in a timely manner, including quality control reports, quantity survey records, requests for variation or change orders, and contractor's claims and invoices.
- (v) Resolve problems that may arise during the construction stage, including technical issues, contractors' claims and variations and contractual issue(s) that may arise.
- (vi) Provide day-to-day reports and advice to the Employer on the progress of the works; and assist the Employer, when necessary, on direction and management of the work(s); maintain a daily record of progress of works, and prepare progress reports.
- (vii) Inspections of materials and equipment procured, including overseas inspections at the suppliers' facilities as may be required under the Employer's contracts with contractor(s)/ suppliers.

3.3.5 The Engineering Consultant shall provide the following services during supervision of the contracts:

- (i) Development of the interim and final measurement and payment systems; establish a monitoring system for costs to date and costs to completion; provide a system for the preparation of interim and final payment certificates; provide advice on the evaluation of all claims and extensions of time; provide advice on the preparation of variation orders, and its monitoring and assist PIU-ET in all matters pertaining to the contract(s), claims and disputes;
- (ii) Review and approval of the Contractor's quality assurance plan, working drawings, supervise and monitor compliance with the plan including establishment of the contractors on-site laboratory, and calibration of all testing equipment;
- (iii) Identify utility services (electricity, telecoms, water), if any, within the right-of-way which need to be relocated.
- (iv) Ensure compliance with the requirements of (a) Environmental Management Plan and report in the quarterly progress reports any social problems with implementation of the plan together with recommendations for implementation of amelioration measures; (b) social impact mitigation, including health and safety; HIV/AIDS and human trafficking awareness; and the gender plan; (c) the loan agreement, the project agreement and project administration manual in terms of social safeguards and resettlement, particularly in the implementation and monitoring of land acquisition and resettlement plans (LARPs), including the preparation of LARP implementation Compliance Reports (CR) and other required

- progress reports under the project, and report any non-compliance in the quarterly progress reports. and report any non-compliance in the quarterly progress reports.
- (v) Conduct monthly contract site meetings, which shall be attended by the Engineering Consultant, the contractor's representative and the Employer, and provide advice to the Employer on procedures necessary to complete the works within the time and cost stated in the works contracts.
  - (vi) Prepare reports and provide assistance, as necessary and as required, to the Disputes Board and during any subsequent arbitration procedures.
  - (vii) For each contract (a) provide the Employer with complete records, reports, and certify completion of part or all of the work and to see that the "as built" drawings are in order; and (b) prepare a final payment certificate, taking over certificate, and performance certificate as required by the General Conditions of Contract.
  - (viii) Ensure that the contractor does not involve child labor in the execution of the civil works contracts in accordance with the provisions of the contract agreement.
  - (ix) Review the socio/economic project performance indicators provided by the employer and collect necessary baseline data and information for project performance monitoring and evaluation during and after the project implementation as required under the project.
  - (x) Carry out the following duties related to environmental mitigation, with particular reference to the technical requirements of sound environmental standards on the basis of IFC Environmental Health and Safety General Guidelines, Railway Sector Guidelines and TL and DL Guidelines during construction: (a) ensure that all the environmental mitigation measures required to be implemented are incorporated in the contract documents; (b) supervise and monitor the implementation of environmental mitigation measures required; and (c) in the event of occurrence of any unexpected environmental impacts, coordinate with the Executing Agency and ADB;
  - (xi) Upon completion of construction to prepare the following reports: (a) Project Monitoring and Evaluation Reporting accordance with the project framework and ADB's *Project Performance Management System Handbook*, including the baseline data survey and the following annual survey and reporting up to project completion; (b) Project Completion Report in conformity with ADB guidelines.
  - (xii) On completion of the construction of facilities, to ensure in coordination with the Employer that the plans for switch-over of operation on the railway line to the new equipment and the removal of old equipment is phased in a manner that will ensure continuity of safe and efficient operations on the railway line.
  - (xiii) The completed project facilities shall be tested by the Engineering Consultant before commissioning as follows: (a) prepare commissioning requirements for each of the project systems before bringing these in to operation; (b) review the current operations arrangements and prepare a simulation of operations for the newly electrified line to verify and validate the traction power design and the operations planning; and (c) before commencement of the simulation work, the Employer should be provided with all details with regard to the simulation tools, impact on operations, if any, and the expected results.
  - (xiv) The Engineering Consultant shall provide assistance to the Employer during the handover of the completed construction works by the contractors. This shall include but not be limited to the following: oversee tests of systems, sub-systems, components and materials; and witness tests done by the contractors as per the contracts; verify and validate the contractor's test results; monitor that all 'as-built' drawings, all operations and maintenance manuals, spare parts and adequate

operations and maintenance training are provided by the contractor(s)/ suppliers to the Employer.

3.4 *Project Manager*: The Employer may appoint and notify that the Engineering Consultant (by name) will be the project Manager as required under the General Conditions of Contract (ADB's Standard Bidding Documents for Plant). As Project Manager, the Engineering Consultant will represent and act for the Employer at all times during the performance of the contract. All notices, instructions, orders, certificates, approvals and all other communications under the contract shall be given by the project Manager, except as may be otherwise provided in the contract. Approval of the Employer will be necessary before taking any of the following actions:

- (i) Approval of any amendments to the detailed design, specification or design standards to be adopted.
- (ii) Approving the subcontracting of any parts of the Works.
- (iii) Certifying additional cost.
- (iv) Determining an extension of time.
- (v) Issuing of any and all change orders related to qualities and prices.

### 3.5 Institutional Strengthening and Operational Safety

3.5.1 The Consultant will support UTY in strengthening functions related to monitoring environmental safeguards for both ADB- and UTY- funded activities.

3.5.2 Furthermore, the Consultant will carry out the following tasks with regards to operational safety for general public along the railway:

- (i) conduct an assessment of the existing and anticipated safety situation to the general public including children, facing the increased train frequencies and speeds as well as the increased risk of shock hazard due to the high-voltage of the electrification,
- (ii) provide recommendation to the UTY the development of practical countermeasures against the issues found in the assessment, and
- (iii) prepare and execute training of staff to plan future railway developments in the safest manner, including the sharing experience with other railway operators in the world.

3.5.3. Training of customer specialists to ensure operational safety and planning the future development of the railway from the experience of railway companies in Japan. Engineer for his own expense will provide training for customer specialists to ensure the operational safety and planning future railway development experience of railway companies in Japan for 10 UTY specialists. During the training in Japan for illustrative teaching material should be provided with access to current international projects. All costs associated with training (visa support, accommodation, flights, meals, etc.) refers to the engineer.

## Inputs

### 4. Schedule and Requirement of consulting services

4.1 A team of international and national consultants is required for the assignment. It is expected that around 122 person-months of international consultants and around 191 person-months of national consultants will be required during the project period of about 41 months.

4.2 The firm has to propose administrative support staff including office manager (1 person), secretary (1 person), translators (4 persons), drivers (3 persons), accountant (1 person), and tax specialist (1 person) for the entire duration of the consulting service assignment (41 months). Related administrative cost shall be included under out-of-pocket expenses as part of the price proposal.

4.3 The Engineering Consultant will provide the services of national consultants through direct engagement of individual experts and/or through association arrangements of national consulting firm/s. In addition, the Consultant will also provide support staff to adequately carry out the assignment.

4.4 The Engineering Consultant's team shall be led by a Team Leader. The Team Leader is responsible for all jobs to be done under the contract for the consulting services. He/she shall assign in writing the work to be done by and/or responsibilities of other experts in the team. He/she will coordinate with other members of the team so that the assigned work can be carried out efficiently and economically. A copy of the assignment of work/ responsibilities to other members of the team will be provided to the Employer. The Team Leader will be ultimately responsible for the delivery and performance of the work.

4.5 The requirement of international and national experts is summarized below.

No.	Description	Duration (person-months)
<b>A.</b>	<b>International Experts</b>	<b>122</b>
1.	Team Leader -Project Specialist/Railway Engineer	31
2.	Procurement and Contracts Specialist	8
3.	Power Supply and SCADA Specialist	27
4.	Signaling and Telecommunications Specialist	28
5.	Railway Safety Specialist	3
6.	Resettlement Specialist	3
7.	Rolling Stock Interface Specialist	4
8.	Signaling Specialist	18
<b>B.</b>	<b>National experts</b>	<b>191</b>
1.	Power Supply and SCADA Specialist	37
2.	Signaling and Telecommunications Specialist	37
3.	Civil Construction Specialist	36
4.	Environment Specialist	35
5.	Resettlement Specialist	22
6.	Rolling Stock Interface Specialist	24
<b>C.</b>	<b>Supporting staff</b>	<b>361</b>
1	Office Manager	37
2	Secretary	37
3	Translator 1	39
4	Translator 2	36
5	Translator 3	20
6	Translator 4	20
7	Tax consultant	40
8	Accountant	40
9	Driver 1	40
10	Driver 2	40

No.	Description	Duration (person-months)
11	Driver 3	12

No. = number, SCADA = Supervisory Control and Data Acquisition.

#### 4.6 *Qualifications of International Experts*

4.6.1 *Team Leader (Project Specialist/Railway Engineer)*: The Team Leader will ideally have a Bachelor's Degree or equivalent in engineering with work experience of at least 15 years, of which about 5 years shall be in similar railway systems; and should have professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Team Leader should have good skills in English language and preferably working knowledge in Russian language.

The Team Leader must hold a power of attorney from the consulting firm to act as the project Manager/ Engineer for the works.

4.6.2 *Procurement and Contracts Specialist*: The Procurement and Contracts Specialist will ideally have a Master Degree or equivalent with procurement experience of at least 10 years in projects financed by multilateral development banks; professional knowledge in procurement procedures as per ADB guidelines; and contract management. The Specialist should be with strong engineering background and have hands-on experience in projects of similar nature and scope (railway projects) as leader of the procurement team. The Specialist should have good skills in English language and preferably working knowledge in Russian language.

4.6.3 *Power Supply and SCADA Specialist*: The Power Supply and SCADA Engineer will ideally have Bachelor's Degree or equivalent in engineering with experience of at least 10 years work in the field of power supply and supervisory control and data acquisition (SCADA) systems for control center facilities for control of systems; professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Engineer should have good skills in English language and preferably working knowledge in Russian language.

4.6.4 *Signaling and Telecommunications Specialist*. The Signaling and Telecommunications Engineer will ideally have Bachelor's Degree or equivalent in engineering with experience of at least 15 years in the field of signaling and telecommunications; professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Engineer should have good skills in English language and preferably working knowledge in Russian language.

4.6.5 *Railway Safety Specialist*: The railway safety specialist will ideally have a Bachelor's degree or equivalent qualification and at least 10 years experience of company management in the railway sector. The consultant should be familiar with the railway safety practice in the railway operators in the world.

4.6.6. *Resettlement specialist*. The international resettlement specialist will ideally have at least master's degree in social sciences, sociology, anthropology or other relevant disciplines for the assignment from a recognized institution, with at least 10 years of continuous experience working in the field of human settlement and social safeguards for internationally funded development

projects. He/she is also required to have considerable experience in resettlement planning and social safeguards monitoring and be familiar with the laws and regulations of Uzbekistan/Central Asian countries related to social safeguards and resettlement as well as having had experience in ADB-financed infrastructure development projects. Training skills and knowledge of Russian would be an advantage.

4.6.7. *Rolling stock interface specialist.* The rolling stock interface specialist will ideally have a Master's Degree or equivalent in railway engineering, electric engineering or mechanical engineering with experience of at least 10 years in the field of procuring, testing, commissioning, operation and maintenance of electric locomotives. The consultant shall be deeply versed with technical parameters of electric locomotives. Experience of working on railways of the 1520 system would be an advantage. Knowledge of Russian language would be an advantage.

4.6.8. *Signaling specialist.* The signaling specialist will ideally have Bachelor's Degree or equivalent in engineering with experience of at least 15 years in the field of signaling; professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The signaling specialist should have good skills in English language and preferably working knowledge in Russian language.

#### 4.7 *Tasks to be performed by International Experts*

4.7.1 *Team Leader (Project Specialist/Railway Engineer):* The Team Leader will coordinate closely with the PIU-ET in the performance of the services. For ADB-financed portion, he/she will review the preliminary design and/or detailed design carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability. He/she will assist the Employer/PIU-ET in all aspects of contract management up to the stage of completion and hand over of works to the Employer. He/she will coordinate with the related UTY staff who is in charge of recently electrified sections and ensure compatibility of designs and facilities and interfacing for efficient and economic operations. If assigned by the Employer, the Team Leader will be the project Manager as required under the General Conditions of Contract (ADB's Standard Bidding Documents for Plant). The Team Leader will take all necessary actions, including assigning of functions to other specialists in the team, for satisfactory performance of services under this TOR and under the consulting services contract.

4.7.2 *Procurement and Contracts Specialist.* The Procurement specialist will assist the PIU-ET in the procurement of goods, works, plant and services for the project. He/she will be responsible for execution of all required procedures up to the stage of contracts awards and signing. He/she will assist the Employer to invite expressions of interest, preparation of short list, issuance of requests for proposals, evaluation, and negotiations to the stage of contract signing. He/she will also assist in the management of contracts in the initial start-up period. He/she will develop and execute a procurement capacity building program which includes training of trainers with the long term objective to systematically institutionalize a strong procurement function within UTY.

4.7.3 *Power Supply and SCADA Specialist.* For ADB-financed portion, the Power Supply and SCADA Engineer will review the preliminary design and/or detailed design of facilities for electrification, including overhead catenary systems, power supply and local and remote control systems, carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability. He/she will: (i) assist the Employer/PIU-ET in management of relevant contracts up to the stage of completion and hand over of works to the Employer; (ii) review all aspects of interfacing of various components under the project; (iii) review the safety plans submitted by the bidders for assuring safety during construction. The Specialist will perform

all jobs as may be assigned by the Team Leader in accordance with this TOR and for successful completion of the consulting services.

**4.7.4 Signaling and Telecommunications Specialist.** For ADB-financed portion, the Signaling and Telecommunications Engineer will review the preliminary design and/or detailed design of signaling and telecommunications facilities under the project prepared by UTY and/or contractors to determine its technical and operational soundness and ability for implementation. He/she will: (i) assist the Employer/PIU-ET in management of relevant contracts up to the stage of completion and hand over of works to the Employer; (ii) review all aspects of interfacing of new installations with the existing facilities and ensure phasing for uninterrupted operation of train services; (iii) review the safety plans submitted by the bidders for ensuring safety during construction. The Specialist will perform all jobs which may be assigned by the Team Leader in performance of this TOR and for successful completion of the consulting services.

**4.7.5 Railway Safety Specialist.** The Specialist will (i) conduct an assessment of the existing and anticipated safety situation to the general public including children, facing the increased train frequencies and speeds as well as the increased risk of shock hazard due to the high-voltage of the electrification, (ii) provide recommendation to the UTY the development of practical countermeasures against the issues found in the assessment, and (iii) prepare and execute training of staff to plan future railway developments in the safest manner, including the sharing experience with other railway operators in the world. The training may include a trip to other country(s) to exchange the ideas and plans for the railway safety with relevant railway operator(s). The Specialist will perform all jobs which may be assigned by the Team Leader in performance of this TOR and for successful completion of the consulting services.

**4.7.6. Resettlement specialist.** Together with the national resettlement specialist, the overall task of the international resettlement specialist is to:

- (i) Assist the PIU in implementation of LARPs, in particular- payment for compensation and other practical arrangements to affected people as per the final compensation and income restoration measures stated in LARPs prior to construction commencement;
- (ii) Under the guidance of, and in close consultation with the PIU, conduct a daily monitoring of the LARP implementation for each project component in accordance with LARP-defined monitoring indicators and further preparation of LARP implementation Compliance Reports;
- (iii) Under the guidance and close consultation with the PIU, update the LARPs (and/or prepare Corrective Action Plans (CAP) as required by ADB) for each project component in case of changes in project designs;
- (iv) Assist the PIU in monitoring of SDDR for 6.7km bypass section and other project associated facilities and related social safeguards issues and recommend corrective measures/actions for PIU's actions as needed.
- (v) Under the guidance and close consultation with the PIU, prepare Semi-annual social monitoring reports with indication of all social safeguards/resettlement related progress and issues for each Project component, including the associated facilities.
- (vi) Contribute inputs to the PMC's quarterly progress reports for project management and supervision and the brief monthly summary reports, highlighting potential and actual issues/problems related to LARPs implementation and recommending corrective measures/actions for PIU's actions.

- (vii) Conduct any other activity, provide an assistance or prepare progress reports/references for the social safeguards/resettlement component of the project upon request of PIU and/or ADB.

The international resettlement specialist shall provide overall methodological guidance to the national resettlement specialist during the above-described monitoring process based on the monitoring indicators and requirements defined by LARPs in accordance with Uzbek laws and regulations and ADB's Safeguards Policy Statement (SPS) of 2009. The international resettlement specialist shall ensure that all the collected data and documents are available for the proper preparation of monitoring reports. Based on the monitoring results and assistance of the national resettlement specialist, the international resettlement specialist will be responsible for the preparation of the following reports:

- (i) LARP implementation Compliance Reports (CR) for each project component (the CR shall indicate overall LARPs implementation actual data against the planned, including the GRM, consultations, issues and corrective actions needed),
- (ii) Semi-annual social monitoring reports (SSMR) for the project, including the associated facilities,
- (iii) Brief monthly summary reports, highlighting potential and actual issues/problems related to LARPs implementation and recommending corrective measures/actions for PIU's actions,
- (iv) Contribute inputs to the PSC's quarterly progress reports for project management and supervision related to LARPs implementation and associated facilities.

The international resettlement specialist, with assistance of the national resettlement specialist, will be responsible for the update of the LARPs (and/or preparation of Corrective Action Plans (CAP) as required by ADB) for each project component in case of changes in project designs. In this regard, the IRS shall ensure that all the necessary impact assessment surveys (DMS, census, SES, valuation) and public consultations are properly implemented in accordance with methodologies and entitlement matrix defined by LARPs and requirements of ADB SPS 2009. The IRS, with assistance of NRS, shall ensure that qualified experts are involved by PMC to implement the impact assessment surveys and valuation. PMC shall ensure the allocation of needed budget for the surveys.

The format and outline of CR and SSMR shall be agreed with PIU beforehand.

4.7.7. *Rolling stock interface specialist.* The rolling stock interface specialist will:

- (i) Support the PIU in the overall planning of introduction and adjustment of rolling stock on the project railway line (and related sections of the railway network), so as to ensure the timely, appropriate and safe deployment of train services for both freight and passengers, in a manner compatible with the overall project schedule.
- (ii) Support UTY with the process of introduction of new passenger electric locomotives and freight electric locomotives, providing expert advice in answering technical questions.
- (iii) Support the PIU in the procurement, testing and commissioning of electric locomotives on the project railway line, to ensure full compatibility with local operating conditions.
- (iv) Provide expert advice to the PIU to ensure that all rolling stock to be used on the line are and shall remain consistent with all applicable national and international safety standards. Work with the railway safety specialist to ensure that operator crew of rolling stock are fully familiarized and trained on safe railway operations on



the project railway line, taking into account the specific local conditions, and on the Uzbekistan railway network in general.

#### *4.7.8. Signaling specialist.*

For ADB-financed portion, the Signaling Specialist will review the preliminary design and/or detailed design of signaling facilities under the project prepared by UTY and/or contractors to determine its technical and operational soundness and ability for implementation. In doing so, she/he will ensure full compatibility of the signaling system with adjoining sections of the railway network and the broader system of signaling on Uzbekistan's railway network. He/she will: (i) assist the Employer/PIU in management of relevant contracts up to the stage of completion and hand over of works to the Employer; (ii) review all aspects of interfacing of new installations with the existing facilities and ensure phasing for uninterrupted operation of train services; (iii) review the safety plans submitted by the bidders for ensuring safety during construction. The Specialist will perform all jobs which may be assigned by the Team Leader in performance of this TOR and for successful completion of the consulting services.

### *4.8 Qualifications and Tasks for National Experts*

4.8.1 All national experts should have basic qualification and work experience of at least 10 years in the relevant fields of railway engineering and operations in Uzbekistan; professional knowledge in the fields of the indicated contracts. The experts should have fluent skills in the Russian language; working knowledge of English language will be given preference.

4.8.2 *Power Supply and SCADA Specialist.* The national expert will perform tasks allocated to them by the Team Leader and by the International Specialist/ Engineer in performance of this TOR and for successful completion of the consulting services. The national expert will assist the international Specialist/ Engineer, for ADB-financed portion, in (i) reviewing the preliminary design and/or detailed design of facilities for electrification; (ii) management of relevant contracts up to the stage of completion and hand over of works to the Employer; and (iii) reviewing all aspects of interfacing of various components under the project and the safety plans submitted by the bidders for assuring safety during construction. Based on his/her experience with local conditions the national expert will give appropriate advice to the international specialist/ expert for ensuring sustainability of the designs and new technologies used for the project.

4.8.3 *Signaling and Telecommunications Specialist.* The national expert will perform tasks allocated to them by the Team Leader and by the International Specialist/ Engineer in performance of this TOR and for successful completion of the consulting services. The national expert will assist the international Specialist/ Engineer, for ADB-financed portion, in (i) reviewing the preliminary design and/or detailed design of signaling and telecommunications facilities under the project; (ii) management of relevant contracts up to the stage of completion and hand over of works to the Employer; and (iii) reviewing all aspects of interfacing of various components under the project and the safety plans submitted by the bidders for assuring safety during construction. Based on his/her experience with local conditions the national expert will give appropriate advice to the international specialist/ expert for ensuring sustainability of the designs and new technologies used for the project.

4.8.4 *Civil Construction Specialist.* The national expert will perform tasks allocated to them by the Team Leader and by the International Specialists/ Engineers in performance of this TOR and for successful completion of the consulting services. The national expert will assist the team leader and the employer, for ADB-financed portion, in (i) reviewing the preliminary design and/or detailed design of all relevant civil works; (ii) management of relevant contracts up to the stage of

completion and hand over of works to the Employer; and (iii) reviewing civil construction aspect of interfacing of various components under the project. Based on his/her experience with local conditions the national expert will give appropriate advice to the team leader and/or international specialists/ experts for ensuring sustainability of the designs and new technologies used for the project.

**4.8.5 Environment Specialist.** National expert on environment will carry out the tasks assigned by the team leader and provide assistance to PIU-ET, especially its safeguard specialist, on environmental issues. The environment specialist shall (i) continually monitor the Contractors' mitigation measures in accordance with the EMP through at least weekly site inspections of the Contractors for both ADB- and UTY-funded activities for the duration of activities and report back the findings to the PMC team leader, PIU-ET staff and to ADB in written form; (ii) advise and endorse Contractors' site-specific EMPs (SEMPs) before submission to PIU-ET for approval prior to commencement of physical works; (iii) prepare a section on Environment, Health and Safety (EHS) in the monthly and quarterly project progress reports; (iv) assist PIU-ET in updating IEE/EMP as necessary; (v) assist PIU in preparing semi-annual environmental monitoring reports; and (vi) provide a short training program on EHS to the PIU-ET safeguard staff and Contractors' environment officers. The environment specialist will coordinate closely with other consultants, especially the resettlement specialists, and ensure that suggested actions related to environment and resettlement are in line with each other.

**4.8.6. Resettlement specialist.** The national resettlement specialist will ideally have at least bachelor's degrees in social sciences, sociology, anthropology, land management, local governance and cadaster or other relevant disciplines for the assignment from a recognized institution with preferably 3 years of professional experience or 5 years of general work experience. The relevant work experience and professional knowledge on land acquisition and resettlement related works, sociological/ field surveys' and monitoring would be an advantage.

Together with the international resettlement specialist, the overall task of the national resettlement specialist is to:

- (i) Assist the PIU in implementation of LARPs, in particular- payment for compensation and other practical arrangements to affected people as per the final compensation and income restoration measures stated in LARPs prior to construction commencement;
- (ii) Under the guidance of, and in close consultation with the PIU, conduct a daily monitoring of the LARP implementation for each project component in accordance with LARP-defined monitoring indicators and further preparation of LARP implementation Compliance Reports;
- (iii) Under the guidance and close consultation with the PIU, update the LARPs (and/or prepare Corrective Action Plans (CAP) as required by ADB) for each project component in case of changes in project designs;
- (iv) Assist the PIU in monitoring of SDDR for 6.7km bypass section and other project associated facilities and related social safeguards issues and recommend corrective measures/actions for PIU's actions as needed.
- (v) Under the guidance and close consultation with the PIU, prepare Semi-annual social monitoring reports with indication of all social safeguards/resettlement related progress and issues for each Project component, including the associated facilities.
- (vi) Contribute inputs to the PMC's quarterly progress reports for project management and supervision and the brief monthly summary reports, highlighting potential and

actual issues/problems related to LARPs implementation and recommending corrective measures/actions for PIU's actions.

- (vii) Conduct any other activity, provide an assistance or prepare progress reports/references for the social safeguards/resettlement component of the project upon request of PIU and/or ADB.

The national resettlement specialist shall contribute his/her input in the above listed tasks based on daily cooperation, consultation and guidance of the international resettlement specialist and PIU's safeguards specialist. In particular, the national resettlement specialist shall assist PIU in:

- (i) Coordination with line agencies such as local administration (Khokimyat), SCLRCGSC at province and district level, valuation companies related to the provision of compensation and other assistance defined by LARP.
- (ii) Facilitating the transfer of funds from the PIU and khokimiyats for payment of compensation to APs.
- (iii) Coordination with rayon administration and contractor to ensure that the land is brought to pre-project condition in case of temporary loss and land acquisition
- (iv) Filing of application on land acquisitions with SCLRCGSC on behalf of PIU as needed
- (v) Help PIU in drafting letters or references related to the LARP implementation process as needed.
- (vi) Help UTY to make the necessary budgetary arrangements available in advance for the preparation, updating and implementation of LARP.
- (vii) Collect all the LARP implementation monitoring data and documents for further reporting based on monitoring indicators as follows:
  - Disclosure and consultation
  - Transfer of compensation and assistance
  - Land allocation by khokimiyats
  - Disbursement of compensation and assistance
  - Compliance review and verification of actual data against the LARP-planned
  - Grievance resolution
  - Notice to proceed for Civil works construction
  - Restoration of land
- (viii) Assist PIU in addressing the grievances in a timely manner and keeping the records of each grievance for further reporting
- (ix) Assist the international resettlement specialist and PIU during the update of the LARPs (and/or preparation of Corrective Action Plans (CAP) as required by ADB) for each project component in case of changes in project designs.
- (x) Other duties upon request of PIU safeguards specialist and IRS
- (xi) Submission of monthly summary reports to international resettlement specialist and PMC team leader, highlighting potential and actual issues/problems related to LARPs implementation/SDDR with attached supporting documents, data and databases for further reporting by PMC to PIU.

**4.8.7. Rolling stock interface specialist.** The national rolling stock interface specialist will ideally have a bachelor's degree or equivalent in railway engineering, electric engineering or mechanical engineering with professional work experience of preferably 10 years or more in the field of procuring, testing, commissioning, operation and maintenance of electric locomotives. The consultant shall be deeply versed with technical parameters of electric locomotives. Experience of working on railways in Uzbekistan is required. Working experience or knowledge of operations of international financial institutions is desirable.

The national rolling stock interface specialist will:

- (i) Support the PIU in the overall planning of introduction and adjustment of rolling stock on the project railway line (and related sections of the railway network), so as to ensure the timely, appropriate and safe deployment of train services for both freight and passengers, in a manner compatible with the overall project schedule.
- (ii) Support UTY with the process of introduction of new passenger electric locomotives and freight electric locomotives, providing expert advice in answering technical questions.
- (iii) Support the PIU in the procurement, testing and commissioning of electric locomotives on the project railway line, to ensure full compatibility with local operating conditions.
- (iv) Provide expert advice to the PIU to ensure that all rolling stock to be used on the line are and shall remain consistent with all applicable national and international safety standards. Work with the railway safety specialist to ensure that operator crew of rolling stock are fully familiarized and trained on safe railway operations on the project railway line, taking into account the specific local conditions, and on the Uzbekistan railway network in general.

#### 4.9 Curriculum vitae

Curriculum vitae for all positions of international and national must be supplied by the Consultant in its proposal. The support staff shall be nominated by the Consultant, on the basis of CV's to the satisfaction of the Employer, at least one month before their input commences as scheduled in the consultant's accepted staffing schedule and work plan to be detailed in the Inception Report.

#### 4.10 Consultant Selection

4.10.1 An international consultant will be selected in accordance with the "*Guidelines on the Use of Consulting Services by the Asian Development Bank and its Borrowers*" using the Quality and Cost-Based Selection (QCBS) procedures, with the submission of a Full Technical Proposal (FTP).

4.10.2 The Engineering Consultant's services will be needed over an estimated period of 46 months with tentative commencement date of 30 August 2017. Candidates for positions of Team Leader, Power Supply and SCADA Specialist, and Signaling and Telecommunications Specialist are preferred from full time staff of the international consultant.

4.10.3 The total scope of services should be divided in two Phases:

Phase I – Tendering process which includes evaluation of the bids and signature of the contracts.  
Phase II – Execution of the Contracts, from commencement to completion of the contracts, and commissioning of all systems built under the project for full scale operations.

4.10.4 During implementation of the project, in case of some delays in realization of the main contracts of the project, the services may need to be re-scheduled and/or postponed, the Employer will not be responsible for any losses nor will any compensation be provided for any losses during this period. Therefore, the Engineering consultant should consider these cases and include into the total price all relevant costs including the travel cost for its international experts. At least two such cases of delays for a total period of 1 year should be considered.

## Reporting Requirements

### 5. Submission of Reports

5.1 During the duration of the consulting services, the Consultant is required to report regularly the progress of the services concurrently to the Employer and ADB. The progress shall be reported through both formal progress meetings (including videoconferences with ADB as necessary) and the submission of progress reports to the Employer and ADB as set out in the table below.

Report	Purpose	Frequency	Comment
Inception Report	To describe the Consultant's approach to the Scope of Work	Once	Due one month after mobilization
Monthly progress report	To document the progress achieved in the previous month, highlight any issues and describe the next month's work plan	Monthly throughout the duration of the Consultancy Services	Due on the last calendar day of the month
Quarterly progress report	To document the progress achieved in the previous quarter and program for the next quarter, highlighting issues and actions taken and matters referred to for guidance.	Quarterly throughout the duration of the Consultancy Services	Due on the last calendar day of the quarter
Final Report	To document the services as completed for preliminary design, describe the drawings, documents and plans prepared, status of the budget and provide details of any delays, variations and claims. A Draft Final Report (DFR) shall be prepared and submitted to the Employer for comment (within one month).	Draft Report and Final Report (DFR)	The DFR shall be submitted one month before completion of preliminary design. Final Report to be submitted one month after receipt of comments from the Employer.
Project Completion Report	To document the results of completion inspection and instruction for necessary corrective work including as built drawings and summary of the Project.	Upon completion of the construction	This is the assistance in the preparation of the said report.
Other Reports	As defined by the Employer that may include: Monthly certificate of payment; Semi-annual environmental monitoring reports; LARP compliance reports (CR) for each project component, within 15 days after the completion of the concerned LARP implementation; Semi-annual social monitoring reports (SSMR); LARP addendum(s) or Corrective Action Plans (CAP) as required Inspection report; Handover report; and Defects liability report	As defined by the Employer during the construction,	This is the assistance in the preparation of the said document and reports.  Generally within 15 days of the completion of the activities for the specific reporting period.

5.2 The inception report, monthly progress reports, quarterly progress reports and project completion report shall be submitted in 5 copies (Russian) and 2 copies (English) to UTY, 2 copies (English) each to ADB and URM; and draft final report (DFR) and final report shall be submitted in 10 copies (Russian) and 5 copies (English) to UTY and 2 copies (English) each to ADB and URM.

5.3 The Engineering Consultant shall:

- (i) Prepare the various reports in a format and level of detail agreed with the Employer and ADB.
- (ii) Maintain records documenting information supplied by the field teams, decisions made at meetings, progress on civil works, certified achievements and milestones, financial records, and any deviations from or changes to the contract plans; all reports shall be approved, dated and signed by the Head PIU.
- (iii) Assist UTY in preparing quarterly progress reports, a project completion report, and monitoring and evaluation reports as required under the Loan and Project Agreements between the Government and ADB.
- (iv) In addition to the hardcopy format, an electronic copy of all reports shall be submitted. The electronic copy shall be in the format of the original software used to create the report (e.g. MS Word, Excel, PowerPoint, AutoCAD, etc.) and in pdf format. Electronic copies shall be submitted on a CD, DVD or equivalent.

### **Facilities to be provided by the Government and Employer**

6.1 Facilities to be provided by the Government and Employer are described in detail in the Section 2 Data Sheet of the Request for Proposal. After completion of the services, the Engineering Consultant shall document and hand over to the Employer all equipment and furniture purchased under the consultant's contract at the same condition in view of depreciation.

## **TERMS OF REFERENCE FOR ENGINEERING AND WORKS SUPERVISION CONSULTANTS (ADDITIONAL FINANCING)**

### **1. General**

1.1 The project aims to complete modernization of railway network linking major cities in the populous Fergana Valley with Tashkent. This will facilitate direct and efficient operation of both freight and passenger train services and thereby promotes economic and social development of the Fergana Valley. The project comes in the form of an additional financing to a project currently being implemented with ADB funds to electrify and modernize the Pap-Namangan-Andijan section in the Fergana Valley (hereafter the “original project”), as well as the work completed by the government and UTY with assistance of People’s Republic of China and the World Bank for the construction of the Angren-Pap railway through the Kamchik Pass. Despite these efforts, signaling and telecommunications systems remain uninstalled on the section Angren-Pap-Kokand-Andijan (and certain branch lines adjacent to this main line), greatly affecting efficiency and safety of rail operations. Although all sections are already electrified (or soon to be electrified), there are limits on the frequency and number of trains that can be run, due to the shortage of, and underpowered traction substations.

1.2 The Project will be aligned with the following impacts: (i) stimulated economic growth in the Fergana Valley, and (ii) increased regional trade along CAREC Corridor 2. The outcome will be “level of rail passenger and freight service in, to and from the Fergana Valley improved.”.

1.3 The project will produce two outputs, in addition to the two outputs under the original project. These two new outputs are:

- Output 3: Railway infrastructure along the Angren-Pap-Kokand-Andijan line upgraded. This includes (i) 2 new traction substations constructed and connected to SCADA, (ii) 2 traction stations upgraded with higher power transformers (iii) 2 section posts constructed, (iv) signaling and telecommunication system installed for approximately 441 and 474.3 kilometers of track respectively, including the section Angren-Pap-Kokand-Margilan-Andijan, and adjacent branch lines<sup>18</sup>, (v) video surveillance system inside the Kamchik tunnel installed<sup>19</sup>, (vi) machinery and equipment for maintenance of electrified lines commissioned.
- Output 4: Train control and management system upgraded. This includes (i) the central train control center in Tashkent upgraded, (ii) an additional backup CTC in Kokand constructed (iii) the automated train timetabling system made functional, and (iv) staff members, including all relevant female technical staff trained on the modernized train control and management system. Thus, UTY’s institutional capacity will be strengthened.

### **2. Objectives**

2.1 The main objectives of the consulting services are to: (i) ensure that the procurement and implementation of electrification, signaling and telecommunications, video surveillance, track works and associated civil works under the project are carried out efficiently and in an economical

---

<sup>18</sup> From Kokand to the border with Tajikistan, from Margilon to the border with the Kyrgyz Republic, from Margilon to Fergana 1 station, and from Block Post 331 to border with Kyrgyz Republic. Furthermore, telecoms (but not signaling) will be installed on two more branch lines, namely Asaka-Shakhrikan, and Andijan 2-Tetakcai, in total of 33.3km.

<sup>19</sup> Covers 48 objects between Angren and Pap through the Kamchik Tunnel, including all level crossings. Includes visual, thermal, 360 degree imaging. Monitoring shall be from Tashkent and Chidak paramilitary post.

manner, consistent with the widely accepted engineering standards and practices for such works, and to the satisfaction of UTY and ADB; and (ii) assist in the institutional strengthening of UTY by conducting an assessment of the existing situation in train control and management systems, development of practical measures and training the staff in the field of train control and management systems based on the example of the developed railway systems of the world.

### 3. Scope of Services

3.1 The tasks and responsibilities of the Consultant outlined in the paragraphs below shall be performed under the supervision of the Project Implementation Unit for Electrification and Renewal of Rolling Stock (PIU-ET) of O'zbekiston Temir Yo'llari (UTY), which will oversee the day-to-day performance of the services, review submissions and deliverables, provide approval, as necessary, and report to the Government/UTY and ADB.

3.2 *Overall responsibility, design reviews and interfacing:* The Consultant shall:

- (i) Assist the Employer/PIU-ET in all technical and commercial matters relating to the project. Based on general technical state of the art and its related experience, the Consultant shall submit its observations and proposals exercising all reasonable skill, care and diligence in the discharge of duties and responsibilities under this terms of reference (TOR). The Consultant shall be responsible for the accuracy and completeness of the assigned tasks.
- (ii) Monitor all contracts for works, goods, and services for the project, which may be financed by ADB. The Employer may authorize the Consultant to act on its behalf. Such authorization shall be made in written form and be consistent with this TOR and the contract between the Employer and the Consultant.
- (iii) Coordinate closely with the PIU-ET in the performance of the services. In all matters relating to the project, the Consultant will report to the PIU-ET and ADB. Decisions on the Consultant's proposals will be the responsibility of the PIU.
- (iv) Coordinate with a.) all those involved in the recently-completed works of electrification on the Pap–Angren/ Pap–Kokand–Andijan sections and b.) all those involved in the ongoing work to electrify the Pap–Namangan–Andijan section. Ensure compatibility of designs and facilities as well as interfacing requirements for safe, efficient and economic operations on the Angren–Pap–Kokand–Andijan railway route, as well as the branch lines defined in footnote 2.
- (v) Follow the laws, regulations and normative documents of the Republic of Uzbekistan.
- (vi) Review the preliminary design and/or detailed design carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability and make recommendations and/or alternative proposals to meet the requirements of the project.
- (vii) Considering that the project has various components and different types of works which will be implemented by various agencies/contractors and there are inter-dependencies, the Consultant shall review all aspects of interfacing of the project and its components including but not limited to (a) technical interface in the designs of various components and parts thereof; (b) interface between the systems on the project section and the systems outside the project section together with countermeasures required in the event that the equipment or facility on either of the sections should fail; (c) interfacing the scheduling of works and equipment installation jobs under the components and parts thereof; and (d) interfacing the implementation of works by one or more agencies/ contractors, so as to ensure



that the requirements for sound implementation of the project and its safe and efficient operation have been adequately considered and provided for.

3.2.1 Consultant shall perform the following key tasks according to the Contract:

- Technical, commercial and in-time project realisation
- Interface-Management
- Construction supervision
- Claim management

3.2.2 In detail, the Consultant shall assist in the following fields:

- Prepare Bidding Documents or revisions thereof, based on the approved procurement approach, as provided in detail in section 3.2., if required.
- Provide technical expertise and review of the preliminary and detailed designs.
- Provide all necessary facilities to the work place (office).
- Assist the PIU-ET throughout the bidding process to select the contractor(s) and/or supplier(s) and award the contract(s).
- Examination and co-ordination of time schedules (construction, assembling, installation)
- Preparation of cash flow plans
- Realisation of interfaces between contracts for specific lots
- Realisation of interfaces between the Employer and contractors/suppliers (the Employer's actions/decisions should be co-ordinated with works performed by the contractors in terms of organisation, technique and time)
- Construction supervision (conformity with approved design, quality, functionality, safety, costs, bills of quantity)
- Participation and approval of acceptance tests
- Participation and acceptance in testing
- Participation and acceptance in commissioning
- Checking of project documentation (as-built plans, operational manuals, maintenance manuals)
- Analysis and determination on claims (technical, financial, and impact on time of completion)
- Assessing compliance with laws, rules, and standards
- Issue of special approvals
- Checking of completeness of deliveries, spare part management
- Examination of warranty claims
- Dispute arbitration

3.3 *Procurement*

3.3.1 Procurement of goods, plant and services financed under the ADB loan will be in accordance with ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The contract packaging for procurement shall be based on the Procurement Plan approved by ADB. Currently it is envisaged that procurement under the project would involve procurement of goods (railway maintenance machinery and equipment), as well as plant (design, supply and install of traction substations, signaling and telecoms, SCADA). In addition, one plant contract is envisaged for the procurement of a train management system to be installed at the central train control center in Tashkent.

3.3.2 The scope of the Consultant's work includes the preparation of the bidding documents for the project and provision of assistance to PIU-ET during the pre-qualification, bidding, including invitation to bid, conducting pre-bid meetings and responding to bidders' requests for clarification and conducting site visits, bid evaluation and preparation of bid evaluation report, contract negotiations, preparing of draft contract and obtaining approval of Government/ ADB for award of contract.

3.3.3 The Consultant will assist the Employer/PIU-ET in all aspects of contract management up to the stage of completion and hand over of works to the Employer. In particular, he/she will prepare the contract management plan that will be used to monitor the contractor performance during the contract implementation; to this end, he/she will update on a monthly basis the contract management plan based on information provided by the contractor in its progress report and will propose to the Employer any necessary corrective measures.

### 3.4 *Supervision of Construction works*

3.4.1 During the construction stage, the Consultant will provide supervision and oversight inspection of the construction contract(s). The scope of the construction supervision services includes carrying out contract administration; construction supervision; supervision of the quality assurance plan; monitoring of the environmental management plan; monitoring of the gender and the health and safety plans (including Covid-19 risk assessment and management), monitoring of the HIV/AIDS and human trafficking awareness plans, review of project performance indicators; a project performance baseline study and social assessments; and a completion of a performance monitoring report at the end of construction.

3.4.2 Upon authorization by the Employer in written form, the Consultant will perform and be responsible for the duties of the Project Manager as defined in the General Conditions of Contract (see ADB's Standard Bidding Document for plant) The Consultants will, in their proposal, nominate a senior officer of the company who will represent the company throughout the assignment. This senior officer will not be separately remunerated under the consultancy agreement, his/her remuneration shall be deemed to be included in the Consultant's overhead.

3.4.3 During tendering the Consultant shall review the safety plans submitted by the bidders for assuring safety during construction. If necessary, the Consultant may require the bidders to submit further details from the point of view of securing safety during construction. During the supervision of the construction work, the Consultant shall confirm that an accident prevention officer proposed by the contractor is duly assigned at the project site and that the construction work is carried out according to the safety plan as well as the safety measures detailed in the program

3.4.4 The Consultant shall assist the Employer with the following tasks:

- (i) Assist the Employer with regard to the execution of the works within the Project schedule, budget, quality and safety requirements, and in compliance with: (a) technical specifications; (b) quality requirements; (c) appropriate local and international standards and regulations; (d) working drawings; installation drawings; and (e) construction safety rules.
- (ii) Ensure that the construction methods proposed by the contractor for carrying out the works are satisfactory, with specific provisions for (i) work in mountainous terrain with large fluctuations in temperature and precipitation, (ii) tight tolerances required for the operation of a high volume of trains, and (iii) traffic management to minimize disruption to train services during construction. Inspect contractor's

- construction equipment, results of material tests, safety of the works, property and personnel;
- (iii) Review the contractor's(s') final designs, design calculations and working drawings for compliance with the project's requirements, and provide comments and recommendations as appropriate. In particular, ensure that the designs proposed are (a.) resilient towards current harsh climate conditions, and future climate change, and (b.) allow for the reliable and safe operation of a high frequency of trains with mixture of passenger and freight.
- (iv) Establish efficient procedures for verifying contractor performance and reporting progress and problems in a timely manner, including quality control reports, quantity survey records, requests for variation or change orders, and contractor's claims and invoices.
- (v) Resolve problems that may arise during the construction stage, including technical issues, contractors' claims and variations and contractual issue(s) that may arise.
- (vi) Provide day-to-day reports and advice to the Employer on the progress of the works; and assist the Employer, when necessary, on direction and management of the work(s); maintain a daily record of progress of works, and prepare progress reports.
- (vii) Inspections of materials and equipment procured, including overseas inspections at the suppliers' facilities as may be required under the Employer's contracts with contractor(s)/ suppliers.

3.4.5 The Consultant shall provide the following services during supervision of the contracts:

- (i) Development of the interim and final measurement and payment systems; establish a monitoring system for costs to date and costs to completion; provide a system for the preparation of interim and final payment certificates; provide advice on the evaluation of all claims and extensions of time; provide advice on the preparation of variation orders, and its monitoring and assist PIU-ET in all matters pertaining to the contract(s), claims and disputes;
- (ii) Review and approval of the Contractor's quality assurance plan, working drawings, supervise and monitor compliance with the plan including establishment of the contractors on-site laboratory, and calibration of all testing equipment;
- (iii) Identify utility services (electricity, telecoms, water), if any, within the right-of-way which need to be relocated.
- (iv) Ensure compliance with the requirements of (a) Environmental Management Plan and report in the semi-annual monitoring reports any environmental and social issues arising during the project implementation and recommendations for implementation of corrective actions; (b) social impact mitigation, including workers' and community health and safety (in particular with respect to Covid-19 risk assessment and management plan); HIV/AIDS and human trafficking awareness; and the gender action plan; and report any non-compliance in the semi-annual monitoring reports, (c) the loan agreement, the project agreement and project administration manual in terms of social safeguards and resettlement, particularly in the implementation and monitoring of the corrective action plan (CAP), and report any emerging land acquisition and resettlement issues, grievances, non-compliance and additional corrective actions in the semi-annual monitoring reports.
- (v) Conduct monthly contract site meetings, which shall be attended by the Consultant, the contractor's representative and the Employer, and provide advice

- to the Employer on procedures necessary to complete the works within the time and cost stated in the works contracts.
- (vi) Prepare reports and provide assistance, as necessary and as required, to the Disputes Board and during any subsequent arbitration procedures.
  - (vii) For each contract (a) provide the Employer with complete records, reports, and certify completion of part or all of the work and to see that the “as built” drawings are in order; and (b) prepare a final payment certificate, taking over certificate, and performance certificate as required by the General Conditions of Contract.
  - (viii) Ensure that the contractor does not involve child labor in the execution of the civil works contracts in accordance with the provisions of the contract agreement.
  - (ix) Review the socio/economic project performance indicators provided by the employer and collect necessary baseline data and information for project performance monitoring and evaluation during and after the project implementation as required under the Project.
  - (x) Carry out the following duties related to environmental mitigation, with particular reference to the technical requirements of sound environmental standards on the basis of ADB’s *Environmental Guidelines for Selected Infrastructure development Projects* during construction: (a) ensure that all the environmental mitigation measures required to be implemented are incorporated in the contract documents; (b) supervise and monitor the implementation of environmental mitigation measures required; and (c) in the event of occurrence of any unexpected environmental impacts, coordinate with the Executing Agency and ADB;
  - (xi) Upon completion of construction to prepare the following reports: (a) Project Monitoring and Evaluation Reporting accordance with the project framework and ADB’s *Project Performance Management System Handbook*, including the baseline data survey and the following annual survey and reporting up to project completion; (b) Project Completion Report in conformity with ADB guidelines.
  - (xii) On completion of physical works, to ensure in coordination with the Employer that the plans for switch-over of operation on the railway line to the new equipment and the removal of old equipment is phased in a manner that will ensure continuity of safe and efficient operations on the railway line.
  - (xiii) The completed project facilities shall be tested by the Consultant before commissioning as follows: (a) prepare commissioning requirements for each of the project systems before bringing these in to operation; (b) review the current operations arrangements and prepare a simulation of operations for the newly electrified line to verify and validate the traction power design and the operations planning; and (c) before commencement of the simulation work, the Employer should be provided with all details with regard to the simulation tools, impact on operations, if any, and the expected results.
  - (xiv) The Consultant shall provide assistance to the Employer during the handover of the completed construction works by the contractors. This shall include but not be limited to the following: oversee tests of systems, sub-systems, components and materials; and witness tests done by the contractors as per the contracts; verify and validate the contractor’s test results; monitor that all ‘as-built’ drawings, all operations and maintenance manuals, spare parts and adequate operations and maintenance training are provided by the contractor(s)/ suppliers to the Employer.

3.5 **Project Manager:** The Employer may appoint and notify that the Consultant (by name) will be the Project Manager as required under the General Conditions of Contract (ADB’s Standard Bidding Documents for Plant). As Project Manager, the Consultant will represent and act for the Employer at all times during the performance of the contract. All notices, instructions, orders,

certificates, approvals and all other communications under the contract shall be given by the Project Manager, except as may be otherwise provided in the contract. Approval of the Employer will be necessary before taking any of the following actions:

- (i) Approval of any amendments to the detailed design, specification or design standards to be adopted.
- (ii) Approving the subcontracting of any parts of the Works.
- (iii) Certifying additional cost.
- (iv) Determining an extension of time.
- (v) Issuing of any and all change orders related to qualities and prices.

### 3.6 *Institutional Strengthening. Assistance in train control and management.*

3.6.1 The consultant will carry out the following tasks in the control of train traffic

- (i) Assess the current status of train control and management systems being used in Uzbekistan
- (ii) Provide practical advice to UTY regarding the further improvement of such train control and management systems, and
- (iii) Prepare and implement training for train control and management systems based on best practices deployed elsewhere in the world.

## 4. **Inputs (Schedule and Requirement of consulting services)**

4.1 A team of international and national consultants is required for the assignment. It is expected that around 94 person-months of international consultants and around 144 person-months of national consultants will be required during the project period of about 36 months.

4.2 The firm has to propose administrative support staff including office manager, secretary, translators (2 persons), tax specialist (1 person) and HR manager for the entire duration of the consulting service assignment (36 months). Related administrative cost shall be included under out-of-pocket expenses as part of the price proposal.

4.3 The Consultant will provide the services of national consultants through direct engagement of individual experts and/or through association arrangements of national consulting firm/s. In addition the Consultant will also provide support staff to adequately carry out the assignment.

4.4 The Consultant's team shall be led by a Team Leader. The Team Leader is responsible for all jobs to be done under the contract for the consulting services. He/she shall assign in writing the work to be done by and/or responsibilities of other experts in the team. He/she will coordinate with other members of the team so that the assigned work can be carried out efficiently and economically. A copy of the assignment of work/ responsibilities to other members of the team will be provided to the Employer. The Team Leader will be ultimately responsible for the delivery and performance of the work.

4.5 The requirement of international and national experts is summarized below.

No.	Description	Duration (person-months)
A.	International Experts	94

No.	Description	Duration (person-months)
1	Team Leader -Project Specialist/Railway Engineer	33
2	Procurement and Contracts Specialist	9
3	Power Supply and SCADA Specialist	25
4	Signaling and Telecommunications Specialist	25
5	Train Control and Management Specialist	4
<b>B.</b>	<b>National Experts and Support Staff</b>	<b>144</b>
1	Power Supply and SCADA Specialist	36
2	Signaling and Telecommunications Specialist	36
3	Civil Construction Specialist	24
4	Resettlement Specialist	24
5	Environmental specialist	24
<b>C.</b>	<b>Supporting staff</b>	<b>216</b>
1	Office Manager	36
2	Secretary	36
3	Translator 1	36
4	Translator 2	36
5	Tax consultant	36
6	HR manager	36

No. = number, SCADA = Supervisory Control and Data Acquisition.

#### 4.6 Qualifications of International Experts

**4.6.1 Team Leader (Project Specialist/Railway Engineer):** The Team Leader will ideally have a Bachelor's Degree or equivalent in engineering with work experience of at least 20 years, of which about 10 years shall be in similar railway systems; and should have professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Team Leader should have good skills in English language and preferably working knowledge in Russian language.

The Team Leader must hold a power of attorney from the consulting firm to act as the Project Manager/ Engineer for the works.

**4.6.2 Procurement and Contracts Specialist:** The Procurement and Contracts Specialist will ideally have Master Degree or equivalent with procurement experience of at least 10 years in projects financed by multilateral development banks; professional knowledge in procurement procedures as per ADB guidelines; and contract management. The Specialist should be with strong engineering background and hands-on experiences in projects with similar nature and scopes (railway projects) as leader of the procurement team. The Specialist should have good skills in English language and preferably working knowledge in Russian language.

**4.6.3 Power Supply and SCADA Specialist:** The Power Supply and SCADA Engineer will ideally have Bachelor's Degree or equivalent in engineering with experience of at least 10 years work in the field of power supply and supervisory control and data acquisition (SCADA) systems for control center facilities for control of systems; professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Engineer should have good skills in English language and preferably working knowledge in Russian language.

**4.6.4 Signaling and Telecommunications Specialist.** The Signaling and Telecommunications Engineer will ideally have Bachelor's Degree or equivalent in engineering with experience of at least 10 years in the field of signaling and telecommunications; professional knowledge in the fields of the indicated contracts, experience in interface management, and project and contract management. The Engineer should have good skills in English language and preferably working knowledge in Russian language.

**4.6.5 Train Control and Management Specialist:** The Train Control and Management Specialist will ideally have a Bachelor's degree or equivalent qualification and at least 10 years' practical experience in the management of train operations. The consultant should be thoroughly versed on best practices in train time tabling, and train movement control practices in the world, and their practical application. The candidate should have good skills in English language. Working knowledge in Russian language would be considered advantageous.

#### **4.7 Tasks to be performed by International Experts**

**4.7.1 Team Leader (Project Specialist/Railway Engineer):** The Team Leader will coordinate closely with the PIU-ET in the performance of the services. For ADB-financed portion, he/she will review the preliminary design and/or detailed design carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability. He/she will assist the Employer/PIU-ET in all aspects of contract management up to the stage of completion and hand over of works to the Employer. He/she will coordinate with the related UTY staff who is in charge of recently electrified sections and ensure compatibility of designs and facilities and interfacing for efficient and economic operations. If assigned by the Employer, the Team Leader will be the Project Manager as required under the General Conditions of Contract (ADB's Standard Bidding Documents for Plant). The Team Leader will take all necessary actions, including assigning of functions to other specialists in the team, for satisfactory performance of services under this TOR and under the consulting services contract.

**4.7.2 Procurement and Contracts Specialist.** The Procurement specialist will assist the PIU-ET in the procurement of goods, works, plant and services for the project. He/she will be responsible for execution of all required procedures up to the stage of contracts awards and signing. He/she will assist the Employer in the management of contracts.

**4.7.3 Power Supply and SCADA Specialist.** For ADB-financed portion, the Power Supply and SCADA Engineer will review the preliminary design and/or detailed design of facilities for electrification, including overhead catenary systems, power supply and local and remote control systems, carried out by UTY and/or contractors to determine its technical and operational soundness and implement ability. He/she will: (i) assist the Employer/PIU-ET in management of relevant contracts up to the stage of completion and hand over of works to the Employer; (ii) review all aspects of interfacing of various components under the project; (iii) review the safety plans submitted by the bidders for assuring safety during construction. The Specialist will perform all jobs as may be assigned by the Team Leader in accordance with this TOR and for successful completion of the consulting services.

**4.7.4 Signaling and Telecommunications Specialist.** For ADB-financed portion, the Signaling and Telecommunications Engineer will review the preliminary design and/or detailed design of signaling and telecommunications facilities under the project prepared by UTY and/or contractors to determine its technical and operational soundness and ability for implementation. He/she will: (i) assist the Employer/PIU-ET in management of relevant contracts up to the stage of completion and hand over of works to the Employer; (ii) review all aspects of interfacing of new installations

with the existing facilities and ensure phasing for uninterrupted operation of train services; (iii) review the safety plans submitted by the bidders for ensuring safety during construction. The Specialist will perform all jobs which may be assigned by the Team Leader in performance of this TOR and for successful completion of the consulting services.

**4.7.5 Train Control System Specialist.** The Specialist will (i) conduct an assessment of the existing situation in Uzbekistan regarding preparation of train time tables and conduction of train movement control, (ii) provide recommendation to the UTY the development of practical countermeasures against the issues found in the assessment, and (iii) prepare and execute training of UTY staff explicitly including women staff, on best practices in train control systems. In particular, the Specialist will examine ways to modernize and integrate train scheduling/time tabling/train control measures for the entire Fergana Valley network, to maximize safety and efficiency. The Specialist will work closely with PIU to help define the technical parameters of the upgrades to the Central Train Control center in Tashkent, and help embed such parameters in the technical specifications of the contractor who will be tasked with its upgrade. The Specialist will perform all jobs which may be assigned by the Team Leader in performance of this TOR and for successful completion of the consulting services.

#### **4.8 Qualifications and Tasks for National Experts**

**4.8.1** All national experts should have bachelor degree or higher and work experience of ideally 10 years or more in their relevant fields. The experts should have fluent skills in the Russian language; working knowledge of English language will be given preference. For the environmental and resettlement specialist, working knowledge of ADB's Safeguard Policies is a requirement.

**4.8.2 Power Supply and SCADA Specialist.** The national expert will perform tasks allocated to them by the Team Leader and by the International Specialist/ Engineer in performance of this TOR and for successful completion of the consulting services. The national expert will assist the international Specialist/ Engineer, for ADB-financed portion, in (i) reviewing the preliminary design and/or detailed design of facilities for electrification; (ii) management of relevant contracts up to the stage of completion and hand over of works to the Employer; and (iii) reviewing all aspects of interfacing of various components under the project and the safety plans submitted by the bidders for assuring safety during construction. Based on his/her experience with local conditions the national expert will give appropriate advice to the international specialist/ expert for ensuring sustainability of the designs and new technologies used for the project.

**4.8.3 Signaling and Telecommunications Specialist.** The national expert will perform tasks allocated to them by the Team Leader and by the International Specialist/ Engineer in performance of this TOR and for successful completion of the consulting services. The national expert will assist the international Specialist/ Engineer, for ADB-financed portion, in (i) reviewing the preliminary design and/or detailed design of signaling and telecommunications facilities under the project; (ii) management of relevant contracts up to the stage of completion and hand over of works to the Employer; and (iii) reviewing all aspects of interfacing of various components under the project and the safety plans submitted by the bidders for assuring safety during construction. Based on his/her experience with local conditions the national expert will give appropriate advice to the international specialist/ expert for ensuring sustainability of the designs and new technologies used for the project.

**4.8.4 Civil Construction Specialist.** The national expert will perform tasks allocated to them by the Team Leader in performance of this TOR and for successful completion of the consulting services. The national expert will assist the team leader and the employer, for ADB-financed portion, in (i)



reviewing the preliminary design and/or detailed design of all relevant civil works; (ii) management of relevant contracts up to the stage of completion and hand over of works to the Employer; (iii) reviewing civil construction aspect of interfacing of various components under the project, and (iv) preparation and submission to PIU-ET the semi-annual reports. Based on his/her experience with local conditions the national expert will give appropriate advice to the team leader and/or international specialists/ experts for ensuring sustainability of the designs and new technologies used for the project.

**4.8.5 Environment Specialist.** National expert on environment will carry out the tasks assigned by the team leader and provide assistance to PIU, especially its safeguard specialist, on environmental issues. The environment specialist shall (i) supervise the adherence of Contractors to mitigation measures in accordance with the EMP for Contractors for both ADB- and UTY-funded activities for the duration of activities and report back the findings to the Consultant team leader, PIU-ET staff and to ADB/AIIB in written form; (ii) advise and endorse Contractors' site-specific EMPs (SEMPs) before submission to PIU for approval prior to commencement of physical works; (iii) prepare a section on Environment, Health and Safety (EHS) in the monthly and quarterly project progress reports; (iv) assist PIU-ET in updating IEE/EMP as necessary; (v) assist PIU-ET in preparing semi-annual environmental monitoring reports in accordance with ADB and AIIB requirements; and (vi) provide a short training program on EHS to the PIU-ET safeguard staff and Contractors' environment officers. The environment specialist will coordinate closely with other consultants, especially the resettlement specialists, and ensure that suggested actions related to environment and resettlement are in line with each other.

**4.8.6. Resettlement specialist.** The overall task of the national resettlement specialist, under the guidance of, and in close consultation with the PIU-ET is to:

- (i) Assist implementation of LARPs (if any), in particular- payment for compensation and other practical arrangements to affected people as per the final compensation and income restoration measures stated in LARPs/SDDR prior to construction commencement;
- (ii) Assist in monitoring of project associated facilities and related social safeguards issues (as stated in the SDDR) and recommend corrective measures/actions for PIU's actions as needed.
- (iii) Conduct a daily monitoring of the LARP/SDDR implementation for each project component in accordance with LARP/SDDR-defined monitoring indicators.
- (iv) Update LARPs and/or prepare Corrective Action Plans (CAP) as required by ADB for each project component in case of changes in project designs. In this regard, ensure that all the necessary impact assessment surveys (DMS, census, SES, valuation) and public consultations are properly implemented in accordance with methodologies and entitlement matrix defined by LARPs and requirements of ADB SPS 2009. The resettlement specialist shall ensure that qualified experts are involved by Consultant to implement the impact assessment surveys and valuation. Consultant shall ensure the allocation of needed budget for the surveys.
- (v) Prepare completion reports for any LARPs or SDDR Corrective Action Plans;
- (vi) Prepare Semi-annual social monitoring reports with indication of all social safeguards/resettlement related progress and issues for each Project component, including the associated facilities.
- (vii) Contribute inputs to the Consultant's quarterly progress reports for project management and supervision and the brief monthly summary reports, highlighting potential and actual issues/problems related to LARPs/SDDR implementation and recommending corrective measures/actions for PIU's actions.

- (viii) Assist PIU-ET in addressing the grievances in a timely manner and keeping the records of each grievance for further reporting
- (ix) Conduct any other activity, provide an assistance or prepare progress reports/references for the social safeguards/resettlement component of the project upon request of PIU and/or ADB.

To achieve the aforementioned, the resettlement specialist shall provide the following support to PIU-ET:

- (i) Coordination with line agencies such as local administration (Khokimyat), SCLRCGCSC at province and district level, valuation companies related to the provision of compensation and other assistance defined by LARP/SDDR.
- (ii) Facilitating the transfer of funds from the PIU-ET and khokimiyats for payment of compensation to APs, if any.
- (iii) Coordination with rayon administration and contractor to ensure that the land is brought to pre-project condition in case of temporary loss and land acquisition.
- (iv) Filing of application on land acquisitions with SCLRCGCSC on behalf of PIU-ET as needed.
- (v) Help PIU-ET in drafting letters or references related to the LARP/SDDR implementation process as needed.
- (vi) Help UTY to make the necessary budgetary arrangements available in advance for the preparation, updating and implementation of LARP.
- (vii) Collect all the LARP implementation monitoring data and documents for further reporting based on monitoring indicators as follows:
  - Disclosure and consultation
  - Transfer of compensation and assistance
  - Land allocation by khokimiyats
  - Disbursement of compensation and assistance
  - Compliance review and verification of actual data against the LARP-planned
  - Grievance resolution
  - Notice to proceed for Civil works construction
  - Restoration of land

The resettlement specialist shall provide overall methodological guidance to the PIU-ET during the above-described monitoring process based on the monitoring indicators and requirements defined by LARPs/SDDRs, and in accordance with Uzbek laws and regulations and ADB's Safeguards Policy Statement (SPS) of 2009. The resettlement specialist shall ensure that all the collected data and documents are available for the proper preparation of monitoring reports. The resettlement specialist will be responsible for the preparation of the following reports:

- (i) If there are any LARPs under the project, then LARP implementation Compliance Reports (CR) for each project component (the CR shall indicate overall LARPs implementation actual data against the planned, including the GRM, consultations, issues and corrective actions needed),
- (ii) Semi-annual social monitoring reports (SSMR) for the project, including the associated facilities,
- (iii) Brief monthly summary reports, highlighting potential and actual issues/problems related to LARPs implementation and recommending corrective measures/actions for PIU's actions,
- (iv) Inputs to the Consultant's quarterly progress reports for project management and supervision related to LARPs implementation and associated facilities.

The format and outline of CR and SSMR shall be agreed with PIU-ET beforehand.

#### 4.9 Curriculum vitae

Curriculum vitae for all positions of international and national must be supplied by the Consultant in its proposal. The support staff shall be nominated by the Consultant, on the basis of CV's to the satisfaction of the Employer, at least one month before their input commences as scheduled in the consultant's accepted staffing schedule and work plan to be detailed in the Inception Report.

#### 4.10 Consultant Selection

4.10.1 An international consultant will be selected in accordance with ADB Policy and the Procurement Regulations for ADB Borrowers (2017, as amended from time to time) using the Quality and Cost-Based Selection (QCBS) procedures, with the submission of a Full Technical Proposal (FTP).

4.10.2 The Consultant's services will be needed over an estimated period of 36 months with tentative commencement date of 1 November 2020. Candidates for positions of Team Leader, Power Supply and SCADA Specialist, and Signaling and Telecommunications Specialist are preferred from full time staff of the international consultant.

4.10.3 The total scope of services should be divided in two Phases:

Phase I –Tendering process which includes evaluation of the bids and signature of the contracts.

Phase II – Execution of the Contracts, from commencement to completion of the contracts, and commissioning of all systems built under the project for full scale operations.

4.10.4 During implementation of the project, in case of some delays in realization of the main contracts of the project, the services may need to be re-scheduled and/or postponed, the Employer will not be responsible for any losses nor will any compensation be provided for any losses during this period. Therefore, the Consultant should consider these cases and include into the total price all relevant costs including the travel cost for its international experts. At least two such cases of delays for a total period of 1 year should be considered.

### 5. Reporting Requirements

5.1 *Submission of Reports.* During the duration of the consulting services, the Consultant is required to report regularly the progress of the services concurrently to the Employer and ADB. The progress shall be reported through both formal progress meetings (including videoconferences with ADB as necessary) and the submission of progress reports to the Employer and ADB as set out in the table below.

Report	Purpose	Frequency	Comment
Inception Report	To describe the Consultant's approach to the Scope of Work	Once	Due one month after mobilization
Monthly progress report	To document the progress achieved in the previous month, highlight any issues and describe the next month's work plan	Monthly throughout the duration of the Consultancy Services	Due on the last calendar day of the month
Quarterly progress report	To document the progress achieved in the previous quarter and program for the next quarter, highlighting issues and actions taken and matters referred to for guidance.	Quarterly throughout the duration of the	Due on the last calendar day of the quarter

Report	Purpose	Frequency	Comment
		Consultancy Services	
Final Report	To document the services as completed for preliminary design, describe the drawings, documents and plans prepared, status of the budget and provide details of any delays, variations and claims. A Draft Final Report (DFR) shall be prepared and submitted to the Employer for comment (within one month).	Draft Report and Final Report (DFR)	The DFR shall be submitted one month before completion of preliminary design. Final Report to be submitted one month after receipt of comments from the Employer.
Project Completion Report	To document the results of completion inspection and instruction for necessary corrective work including as built drawings and summary of the Project.	Upon completion of the construction	This is the assistance in the preparation of the said report.
Other Reports	As defined by the Employer that may include: Monthly certificate of payment; Semi-annual environmental monitoring reports; LARP compliance reports (CR) for each project component, within 15 days after the completion of the concerned LARP implementation; Semi-annual social monitoring reports (SSMR); LARP addendum(s) or Corrective Action Plans (CAP) as required Inspection report; Handover report; and Defects liability report	As defined by the Employer during the construction,	This is the assistance in the preparation of the said document and reports.  Generally within 15 days of the completion of the activities for the specific reporting period.

5.2 The inception report, monthly progress reports, quarterly progress reports and project completion report shall be submitted in 5 copies (Russian) and 5 copies (English) to UTY, 2 copies (English) to ADB; and draft final report (DFR) and final report shall be submitted in 10 copies (Russian) and 5 copies (English) to UTY and 2 copies (English) to ADB.

5.3 The Consultant shall:

- (i) Prepare the various reports in a format and level of detail agreed with the Employer and ADB.
- (ii) Maintain records documenting information supplied by the field teams, decisions made at meetings, progress on civil works, certified achievements and milestones, financial records, and any deviations from or changes to the contract plans; all reports shall be approved, dated and signed by the Head PIU.
- (iii) Assist UTY in preparing quarterly progress reports, a project completion report, and monitoring and evaluation reports as required under the Loan and Project Agreements between the Government and ADB.
- (iv) In addition to the hardcopy format, an electronic copy of all reports shall be submitted. The electronic copy shall be in the format of the original software used to create the report (e.g. MS Word, Excel, PowerPoint, AutoCAD, etc.) and in pdf format. Electronic copies shall be submitted on a CD, DVD or equivalent.

## 6. Facilities to be provided by the Government and Employer

6.1 Facilities to be provided by the Government and Employer are described in detail in the Section 2 Data Sheet of the Request for Proposal.