

Project Administration Manual

Project Number: 43151

Loan Numbers: L2629 (OCR), L2630 (ADF), L8244 (JICA)

Updated November 2013

Republic of Uzbekistan: Talimarjan Power Project

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Project Administration Manual Purpose and Process

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

State Joint Stock Company (SJSC) Uzbekenergo, the executing agency, is wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by the executing agency 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 Agreements. Such agreements shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan Agreements, the provisions of the Loan Agreements shall prevail.

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

ABBREVIATIONS

ADB	=	Asian Development Bank
ADF	=	Asian Development Fund
AFS	=	audited financial statements
CCGT	=	combined cycle gas turbine
DMF	=	design and monitoring framework
EA	=	executing agency
EIA	=	environmental impact assessment
EPC	=	engineering, procurement and construction
GDP	=	gross domestic product
GwH	=	gigawatt hour
ICB	=	international competitive bidding
IEE	=	initial environmental examination
IFRS	=	International Financial Reporting Standards
JICA	=	Japan International Cooperation Agency
LIBOR	=	London interbank offered rate
NAS	=	National Accounting Standards
NCB	=	national competitive bidding
O&M	=	operations and maintenance
OCR	=	ordinary capital resources
PAI	=	project administration instructions
PAM	=	project administration manual
PMU	=	project management unit
QCBS	=	quality- and cost-based selection
SBD	=	standard bidding documents
SPS	=	Safeguard Policy Statement
TOR	=	terms of reference
UFRD	=	Uzbekistan Fund for Reconstruction and Development

I. PROJECT DESCRIPTION

A. Impact and Outcome

1. The Project involves a new power plant to improve energy security and facilitate regional energy trade. It also aims to increase energy efficiency and save energy through clean power generation. Support investments will increase regional connectivity. The investments also target better power sector performance and management and service to customers.

B. Outputs

2. These are physical and non-physical in nature. Power supply will be increased by 4,700 GWh per year, and power generation efficiency will increase from 31% to 50%. Power system will operate more reliably, and Uzbekenergo's corporate management and performance will be improved.

1. Physical

3. Two CCGT units (370-450 MW each) will be constructed at the Talimarjan TPP. Each unit will have (i) gas turbine with electrical generator, (ii) heat recovery steam generator, (iii) steam turbine with electrical generator, (iv) deaerator unit, (v) steam condenser, and (vi) ancillary equipment including generator transformer, systems for control, electrical switching, oil, water and gas treatment, cooling water, and all other plant auxiliaries. Construction will be done by an engineering, procurement and construction (EPC) contractor. The EPC contract scope covers detailed design, selection of equipment, installation, testing and commissioning. The first unit will be commissioned in March 2014, and the second unit in December 2014. An implementation consultant will supervise the construction and report on progress.

4. A community service center will also be built for the employees and their families. Uzbekenergo will use this center for (i) vocational training for female family members, (ii) finance for micro enterprises such as a laundry service, salon, bakery, cafe and a handicraft place, (iii) training on various social issues (such as hygiene, preventive medical, family planning, and child rearing), (iv) cultural activities, and (v) sports and recreational activities.

2. Non-Physical

5. A special capacity development component will support Uzbekenergo improve its management, financial and operational performance. Key areas are: (i) corporate management, (ii) financial management systems and audit capabilities, (iii) operation and maintenance of CCGT power plants, and (iv) social and gender development aspects. The program will start with a comprehensive needs assessment. Experts will be engaged to help Uzbekenergo with the work. The necessary equipment, software, training and consulting services will be financed under the Project.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Indicative Activities	2010 (Months)						Who responsible
	1	2	3	4	5	6	
Advance Tender Preparation (PPTA-Firm: TA7350))	X	-	-	-	ADB-PPTA
Establish project implementation arrangements			X				EA
ADB Board approval				X			ADB
Loan signing					X		ADB-GoU
Government legal opinion provided						X	GoU
Loan effectiveness						X	GoU-ADB

ADB = Asian Development Bank, PPTA = project preparatory technical assistance, EA = executing agency,
GoU = Government of Uzbekistan.

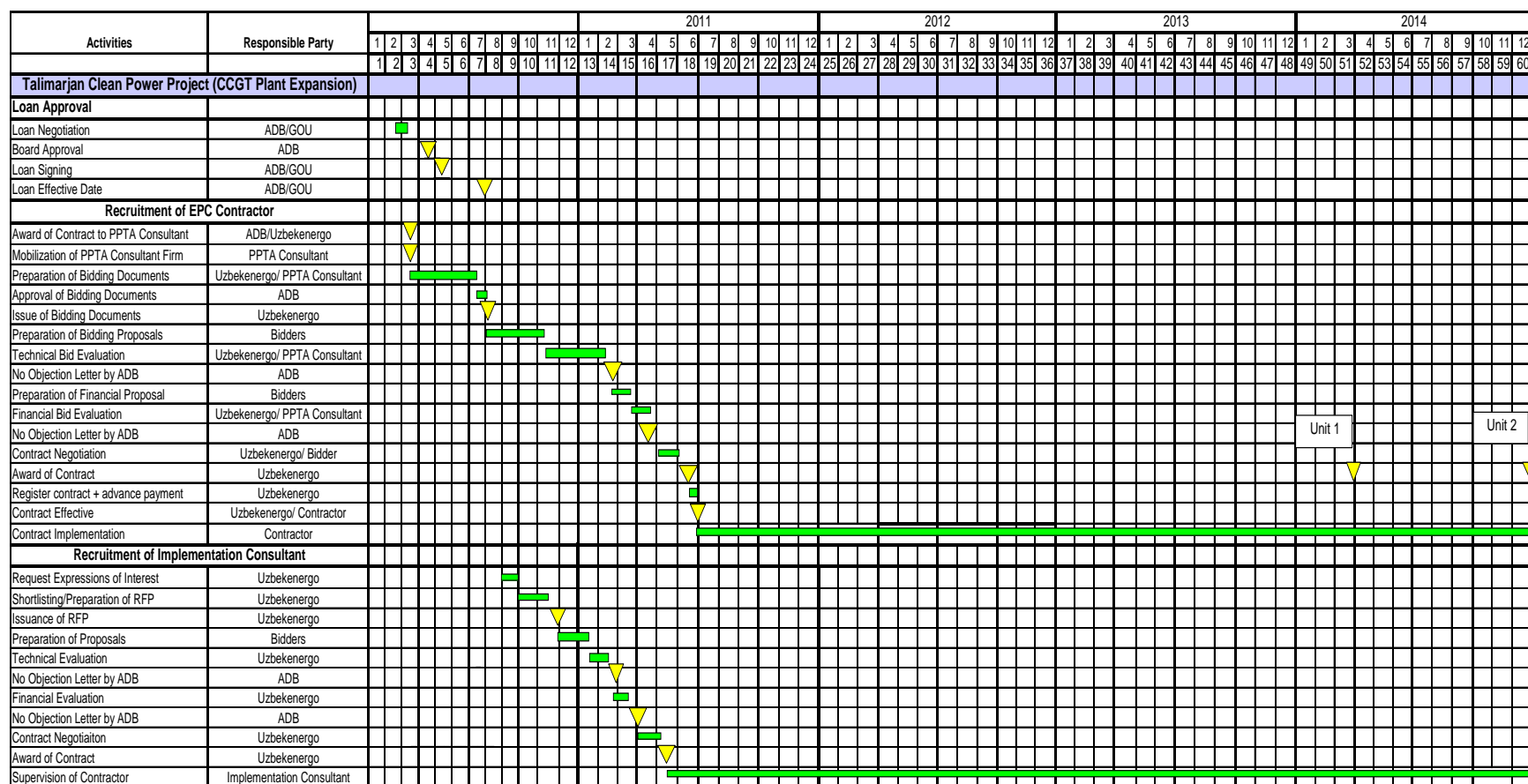
B. Overall Project Implementation Plan

Indicative Activities	2010 (Qtr)				2011 (Qtr)				2012 (Qtr)				2013 (Qtr)				2014 (Qtr)				2015 (Qtr)				2016 (Qtr)			
A. DMF																												
Output 1: CCGT power plant																												
Activity 1.1 EIA posting																												
Activity 1.2 PPTA consultant recruitment																												
Activity 1.3 Community and gender action plan prepared	*																											
Activity 1.4 Implementation consultant recruited	*																	*										
Activity 1.5 EPC contract award	*																											
Activity 1.6 Commissioning of first unit					*																							
Activity 1.7 Commissioning of second unit	*																*											
Output 2 Improved capacity of Uzbekenergo																			*									
Activity 2.1 Needs assessment		*																	*									
Activity 2.2 Key training commencement					*																							
B. Management Activities																												
Procurement plan key activities to procure contract packages																												
Consultant selection procedures																												
Environment management plan key activities																												
Communication strategy key		*				*																						

[illegible]

CCGT = combined cycle gas turbine; EIA = environmental impact assessment; EPC = engineering, procurement, and construction; PPTA = project preparatory technical assistance; qtr = quarter.

Talimarjan Power Project: Detailed Gantt Chart



ADB = Asian Development Bank, CCGT = combined cycle gas turbine, GOU = Government of Uzbekistan, PPTA = project preparatory technical assistance, RFP = request for proposal.

Source: Asian Development Bank estimates.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Stakeholders – Roles and Responsibilities

Project Stakeholders	Management Roles and Responsibilities
• Ministry of Finance	Borrower <ul style="list-style-type: none"> ➤ Ministry representing for external borrowing ➤ Electricity tariff setting
• SJSC Uzbekenergo	Executing Agency <ul style="list-style-type: none"> ➤ Power generation, transmission and distribution ➤ Funding balance of project cost
• ADB	Lender <ul style="list-style-type: none"> ➤ Main project financier
• JICA	Co-Financier <ul style="list-style-type: none"> ➤ Joint co-financier of the Project
• Uzbekistan Fund for Reconstruction and Development (UFRD)	Local Financial Partner <ul style="list-style-type: none"> ➤ Government lending institutions partially taking counter-part funding role
• World Bank	Financier for Associated Facilities <ul style="list-style-type: none"> ➤ Funding associated facilities (substation/transmission)
• Ministry of Economy	Designated National Agency (DNA) for Clean Development Mechanism (CDM) <ul style="list-style-type: none"> ➤ Authority for endorsing CDM

B. Key Persons Involved in Implementation

Executing Agency

Agency Name	Officer's Name: Mr. I. Basidov
	Position: Project Director
SJSC Uzbekenergo	Telephone: +99871-236-2262
	Fax: +99871-236-2262
	Email address: grp_tal_tes@mail.ru
	Office Address:
	[Tashkent] 6 Khorezmskaya St., Tashkent, 100000, Uzbekistan
	[Talimarjan] Talimarjan Thermal Power Station, Nuristan Settlement, Nishan Area, Kashkadarya Region, Uzbekistan

ADB

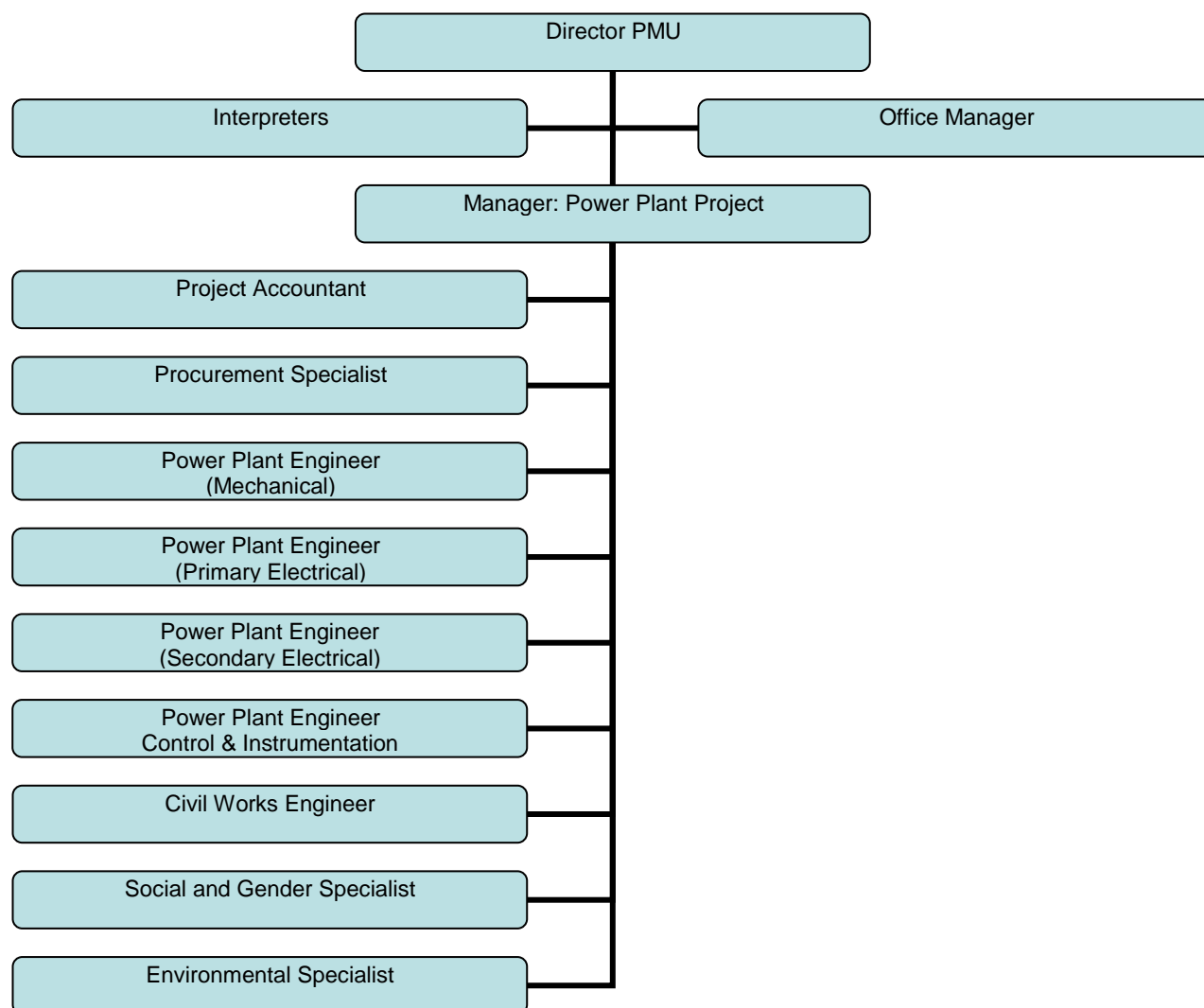
Division Director	Staff Name: Mr. P.B. Song
	Position: Director, Energy and Natural Resources Division, Central and West Asia Department (CWRD/CWEN)
	Telephone No.: +632-632-6356
	Email address: psong@adb.org

Mission Leader

	Staff Name: Mr. Bayanjargal Byambasaikhan
	Position: Energy Specialist
	Telephone No.: +632-632-6359
	Email address: bbyambasaikhan@adb.org

C. Project Organization Structure

6. SJSC Uzbekenergo will establish a dedicated full-time Project Management Unit (PMU) responsible for management of the Talimarjan Power Project. The PMU will manage the procurement and consulting contracts on behalf of SJSC Uzbekenergo. The PMU will include the following positions:



7. The Director of the PMU will report directly to the Chairman of SJSC Uzbekenergo. The PMU will be the main point of contact for working communication between SJSC Uzbekenergo and financing agencies. The PMU will coordinate the consultants and contractors.

8. The PMU, assisted by the consultants, will submit the necessary project plans, tender evaluation reports, progress reports, applications for withdrawal of funds, and any other required reports to ADB and the financing agencies.

9. The PMU Director and PMU staff will have appropriate academic qualifications with experience of working on large investment projects. The Director and Manager will be senior power plant engineers with experience in construction and/or operations. The Project

Accountant, Power Plant Engineers, Civil Works Engineer, Social and Gender Specialist and Environmental Specialist will have relevant experience and academic qualifications in their specialty area. The Procurement Specialist will have required academic qualifications with experience in procurement of consultants and contractors.

10. The Terms of Reference of the Director PMU and PMU staff are as:

Position	Terms of Reference
Director PMU	<ul style="list-style-type: none"> • Provide overall direction and management of PMU. • Ensure project is delivered on schedule to budget and specification • Manage relationships with financiers, consultants, and contractors • Ensure appropriate reporting to financiers • Ensure Chairman Uzbekenergo is appraised of project developments on ongoing basis
Head Power Plant Project	<ul style="list-style-type: none"> • Assist Director PMU in delivery of his/her duties • Manage power plant consultants and contractors • Manage PMU power plant staff
Project Accountant	<ul style="list-style-type: none"> • Maintain project accounts • Prepare withdrawal applications • Monitor loan covenants • Prepare project financial reports
Procurement Specialist	<ul style="list-style-type: none"> • Prepare Request for Proposals for consultant services • Prepare bid evaluation reports • Monitor compliance of consultants and contractors with contract requirements • Prepare overall project progress report • Prepare contract award and disbursement projections
Power Plant Engineer (Mechanical)	<ul style="list-style-type: none"> • Monitor consultants and contractors progress and delivery to contract • Review submission by consultants in area of specialty • Prepare progress reports • Assist Head Power Plant PMU in delivery of his/her duties
Power Plant Engineer (Primary Electrical)	<ul style="list-style-type: none"> • As above
Power Plant Engineer (Secondary Electrical)	<ul style="list-style-type: none"> • As above
Power Plant Engineer Control & Instrumentation	<ul style="list-style-type: none"> • As above
Civil Works Engineer	As above
Social and Gender Specialist*	Ensure the implementation of the social and gender management program
Environmental Specialist*	Ensure the implementation of the environmental management plan

*The Implementation Consultant will provide capacity development training to the Social & Gender Specialist and Environmental Specialist positions.

IV. COSTS AND FINANCING

11. The Project costs consist of: (i) EPC contract for the power plant and ancillary facilities, (ii) community service facility, (iii) project supervision consulting services, (iv) capacity development component, and (v) financial charges. Uzbekenergo will separately finance the cost of PMU from outside the Project costs.

- (i) **EPC contract:** This will be financed by ADB (OCR), JICA, UFRD, Uzbekenergo and the Government of Uzbekistan (GoU). JICA is a joint co-financier under Accelerated Co-Financing Schem with ADB (ACFA), while UFRD is a local financial partner contributing to counterpart funding together with Uzbekenergo and GoU. GoU will finance the taxes and duties, while the remaining will be financed by ADB, JICA, UFRD, and Uzbekenergo on a pro-rata basis determined by the ratio described in the loan agreement.
- (ii) **Community service facility:** This will be financed by Uzbekenergo and GoU. GoU will finance the taxes and duties.
- (iii) **Project supervision consulting services:** This contract will be financed by ADB (OCR) and GoU. GoU will finance the taxes and duties.
- (iv) **Capacity Development Component:** This component will be financed by ADB (ADF) and GoU. GoU will finance the taxes and duties.
- (v) **Financial Charges:** Uzbekenergo will finance the financial charges including interest during construction and commitment charges without capitalizing them into respective loans.

A. Cost Estimates by Expenditure Category

(\$ million)		
Item	Total Cost	% of Total Base Cost
A. Investment Costs		
1 EPC Contract/Equipment/Civil Works etc.	893.05	69.8%
2 Social Infrastructure	1.50	0.1%
3 Implementing Consulting Services	8.61	0.7%
4 Capacity Development (Equipment/Consulting Services)	8.96	0.7%
5 Taxes and Duties	230.00	18.0%
Subtotal (A)	1140.62	89.1%
B. Contingencies		
1 Physical	56.05	4.4%
2 Price	40.39	3.2%
Subtotal (B)	96.44	7.5%
C. Financing Charges During Implementation		
1 Interest During Implementation	37.74	2.9%
2 Commitment Charges	5.20	0.4%
Subtotal (C)	42.94	3.4%
D. Total Project Cost (A+B+C)	1280.00	100.0%

EPC=engineering, procurement, construction

Source: Asian Development Bank estimates.

B. Allocation and Withdrawal of Loan Proceeds

ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS (OCR) (Talimarjan Power Project)			
CATEGORY			ADB FINANCING BASIS
Number	Item	Total Amount Allocated for ADB Financing \$ Category	Percentage of ADB Financing from the Loan Account
1	Turnkey contract	331,000,000	34 percent of total expenditure claimed*
2	Consulting Services	9,000,000	100 percent of total expenditure claimed*
	Total	340,000,000	

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

ALLOCATION AND WITHDRAWAL OF LOAN PROCEEDS (ADF) (Talimarjan Power Project)			
CATEGORY			ADB FINANCING
Number	Item	Amount Allocated SDR Category	Percentage and Basis for Withdrawal from the Loan Account
1	Equipment	1,963,000	100 percent of total expenditure*
2	Consulting Services	3,925,000	100 percent of total expenditure*
3	Unallocated	654,000	
	Total	6,542,000	

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

C. Expenditure Accounts by Financier

(\$ million)													
Item	ADB (OCR)		ADB (ADF)		JICA		UFRD		GoU		Uzbekenergo		Total Cost
	% of Cost		% of Cost		% of Cost		% of Cost		% of Cost		% of Cost		
	Amount	Category	Amount	Category	Amount	Category	Amount	Category	Amount	Category	Amount	Category	
A. Investment Costs													
1 EPC Contract/Equipment/Civil Works etc.	281.39	82.8%	-	-	254.99	85.0%	250.00	100.0%	-	-	106.67	71.1%	893.05
2 Social Infrastructure	-	-	-	-	-	-	-	-	-	-	1.50	1.0%	1.50
3 Implementing Consulting Services	8.61	2.5%	-	-	-	-	-	-	-	-	-	-	8.61
4 Capacity Development (Equipment/Consulting Services)	-	-	8.96	89.6%	-	-	-	-	-	-	-	-	8.96
5 Taxes and Duties	-	-	-	-	-	-	-	-	230.00	100.0%	-	-	230.00
Subtotal (A)	290.00	85.3%	8.96	89.6%	254.99	85.0%	250.00	100.0%	230.00	100.0%	106.67	71.1%	1140.62
B. Contingencies	50.00	14.7%	1.04	10.4%	45.01	15.0%	-	-	-	-	0.39	0.3%	96.44
C. Financing Charges During Implementation	-	-	-	-	-	-	-	-	-	-	42.94	28.6%	42.94
D. Total Project Cost (A+B+C)	340.00	100.0%	10.00	100.0%	300.00	100.0%	250.00	100.0%	230.00	100.0%	150.00	100.0%	1280.00
% Total Project Cost		27%		1%		23%		20%		18%		12%	100%

ADB = Asian Development Bank, ADF = Asian Development Fund, EPC = engineering, procurement, construction, GoU = Government of Uzbekistan, JICA = Japan International Cooperation Agency, OCR = ordinary capital resources, UFRD = Fund for Reconstruction and Development of the Republic of Uzbekistan.

Source: Asian Development Bank estimates.

D. Expenditure Accounts by Outputs/Components

(\$ million)					
Item	Total Cost	Clean and efficient technology Component 1		Uzbekenergo's capacity development Component 2	
		Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs^a					
1 EPC Contract/Equipment/Civil Works etc.	893.05	893.05	70.4%	-	0.0%
2 Social Infrastructure	1.50	1.50	0.1%	-	0.0%
3 Implementing Consulting Services	8.61	8.61	0.7%	-	0.0%
4 Capacity Development (Equipment/Consulting Services)	8.96	-	0.0%	8.96	72.6%
5 Taxes and Duties	230.00	227.94	18.0%	2.06	16.7%
Subtotal (A)	1140.62	1129.60	89.1%	11.02	89.2%
B. Contingencies					
1 Physical ^b	56.05	55.50	4.4%	0.55	4.5%
2 Price ^c	40.39	39.89	3.1%	0.50	4.0%
Subtotal (B)	96.44	95.39	0.0%	1.05	0.0%
C. Financing Charges During Implementation^d					
1 Interest During Implementation	37.74	37.46	3.0%	0.28	2.3%
2 Commitment Charges	5.20	5.20	0.4%	-	0.0%
Subtotal (C)	42.94	42.66	3.4%	0.28	2.3%
D. Total Project Cost (A+B+C)	1280.00	1267.65	100.0%	12.35	100.0%

EPC = engineering, procurement, and construction.

a In mid-2009 prices.

b Computed at 5% of total material cost.

c Computed at 0.8% of costs for foreign currency and 12.6% of costs for local currency.

d Includes interest and commitment charges. Interest during construction has been computed as follows: ADB's ordinary capital reserve and Fund for Reconstruction and Development of the Republic of Uzbekistan: at the five-year forward London interbank-offered rate plus a spread of 0.20% minus rebate (0.28%); ADB's Asian Development Fund: 1.0% plus a spread of 0.2%; and Japan International Cooperation Agency:

Source: Asian Development Bank estimates.

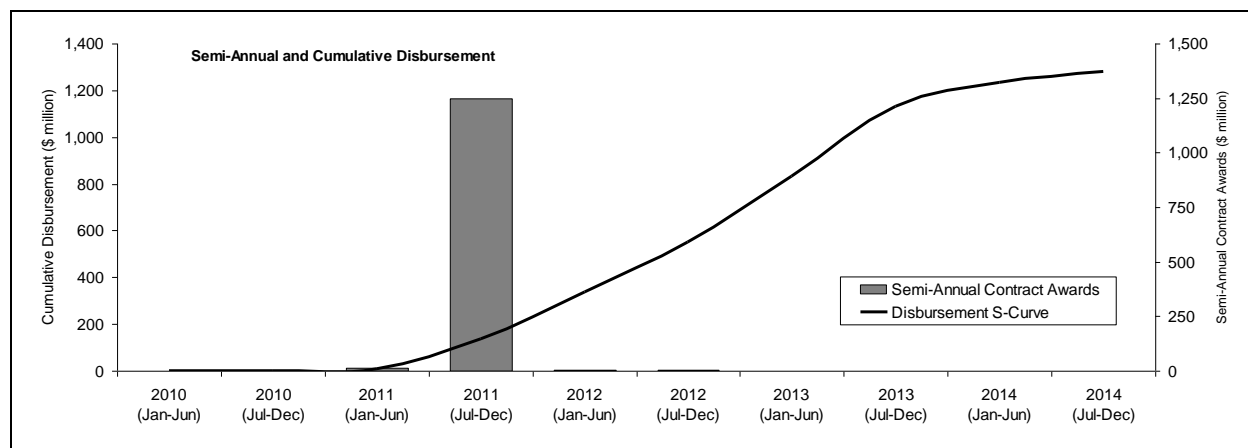
E. Expenditure Accounts by Year

(\$ million)						
Item	Total Cost	Year 1	Year 2	Year 3	Year 4	Year 5
A Investment Costs						
1 EPC Contract/Equipment/Civil Works etc.	893.05	-	89.81	300.54	412.90	89.81
2 Social Infrastructure	1.50	-	0.15	0.68	0.53	0.15
3 Implementing Consulting Services	8.61	0.86	1.72	2.15	2.15	1.72
4 Capacity Development (Equipment/Consulting Services)	8.96	0.90	1.79	2.24	2.24	1.79
5 Taxes and Duties	230.00	0.40	26.52	75.28	101.27	26.53
Subtotal (A)	1140.62	2.16	119.84	380.22	518.56	119.85
B Contingencies	96.44	0.14	8.20	30.51	46.55	11.05
C Financing Charges During Implementation	42.94	2.33	2.72	6.94	13.74	17.21
Total Project Cost (A+B+C)	1280.00	4.63	130.75	417.67	578.84	148.10
% Total Project Cost	100%	0%	10%	33%	45%	12%

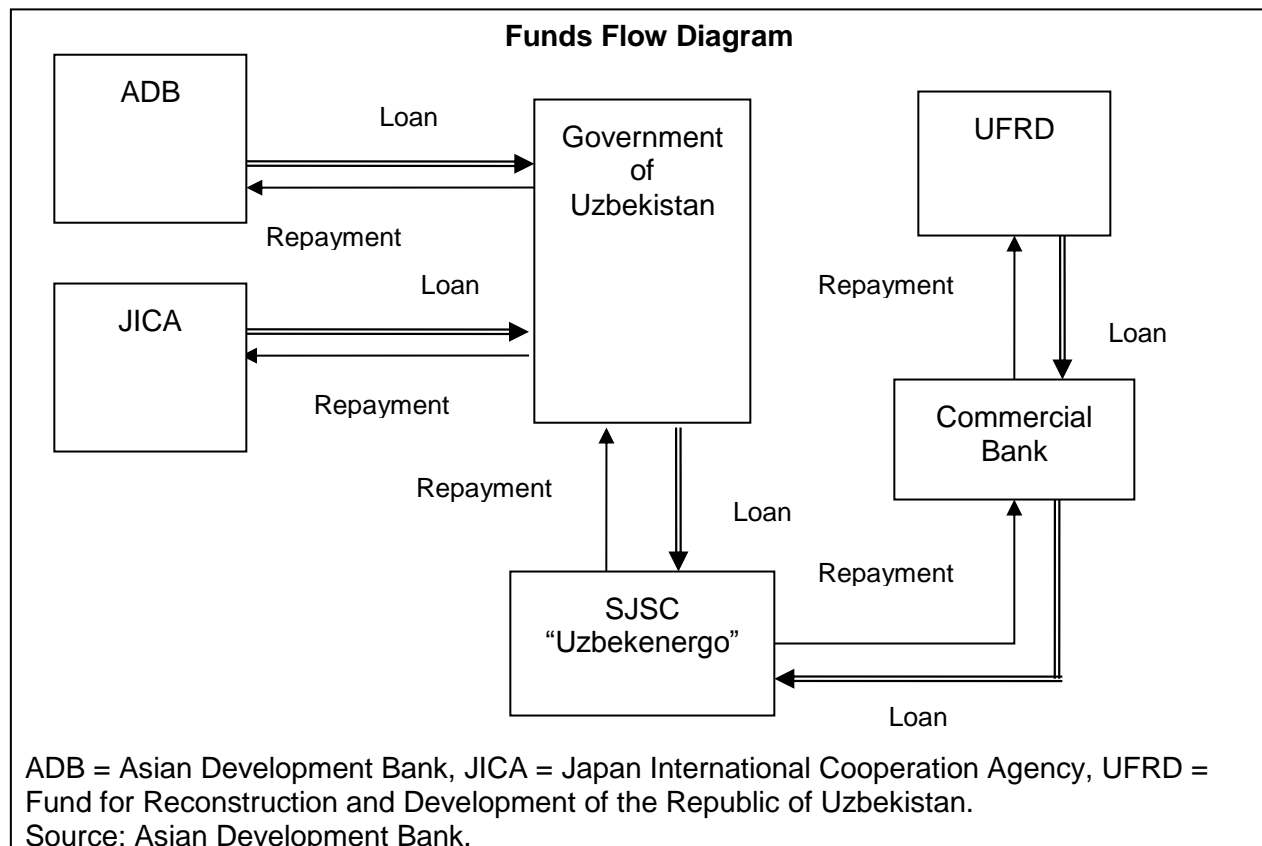
EPC = engineering, procurement, and construction.

Source: Asian Development Bank estimates.

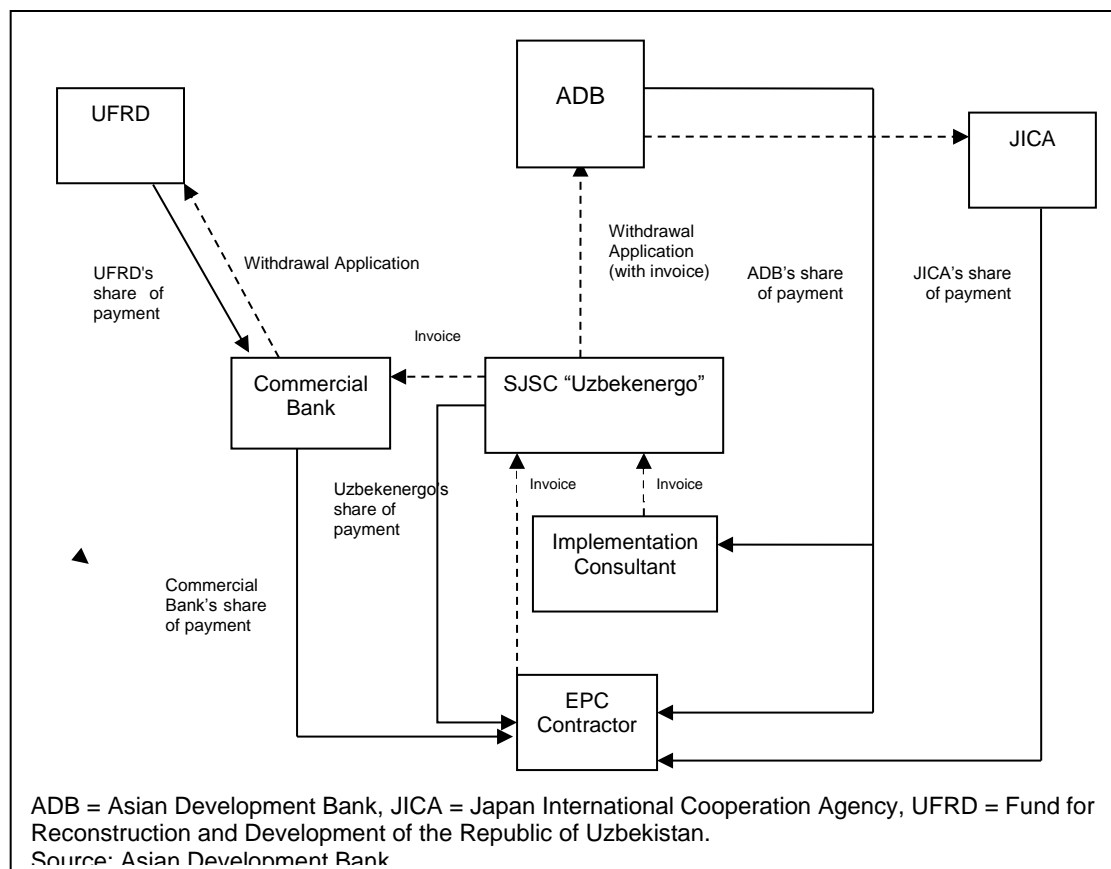
F. Contract and Disbursement S-curve



G. Fund Flow Diagram



H. Disbursement Mechanism



V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

12. Financial management assessment of the EA found that it has basic financial and accounting policy, adopting accrual accounting, double entry book-keeping and other generally accepted accounting principles and conventions in compliance with the current national standards.

13. The EA needs to develop capacity to provide comprehensive financial statements comprising income statements, balance sheets and cash flow statements and detailed supplementary information on its finances and accounts. Another aspect of capacity development need is in the foreign exchange risk management. The capacity development component may be used to finance appointment of experienced, international financial management consultants to assist the company to develop these functions and to train local staff. The specific scope will be identified by the need assessment.

B. Disbursement

14. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement*

Handbook (2007, as amended from time to time),¹ and detailed arrangements agreed upon between the Government and ADB.

15. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),² ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list (Appendix 5) to subprojects financed by ADB.

16. The Project primarily uses direct payment method for the EPC contract. Each claim by the EPC contractor will be financed on a pro rata basis by respective financiers in accordance with the ratio determined in the loan agreements. Reimbursement method may be used when necessary subject to prior ADB approval.³ For the consulting services, the commitment procedure may be used. PMU, assisted by project implementation and supervision consultants, will prepare disbursement projections, collect supporting documents, and prepare and send withdrawal applications to ADB. The EA will ensure necessary budgetary allocations for counterpart funds.

17. Before the submission of the first withdrawal application, the borrower 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 value per withdrawal application is US\$100,000, unless otherwise approved by ADB. The borrower is to consolidate claims to meet this limit for reimbursement and imprest account claims. 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.

C. Accounting

18. The EA will cause PMU to maintain separate project accounts and records by funding source for all expenditures incurred on the Project. Project accounts will follow international accounting principles and practices satisfactory to ADB.

19. At the PMU a project financial consultant/contract administrator would assist with recording the project costs, preparation of loan disbursements and preparation of progress reports to ADB.

D. Auditing

20. The EA will cause the detailed consolidated project accounts to be audited in accordance with International Standards on Auditing and in accordance with the Government's audit regulations by an auditor acceptable to ADB. The audited accounts will be submitted in the English language to ADB within 6 months of the end of the fiscal year by the executing agency. The Government and the executing agency have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited accounts. 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. For

¹ Available at: http://www.adb.org/Documents/Handbooks/Loan_Disbursement/loan-disbursement-final.pdf

² Available at: <http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf>

³ Available at: http://www.adb.org/documents/handbooks/loan_disbursement/chap-06.pdf

revenue generating projects only, ADB requires audited financial statements (AFS) for the executing agency associated with the Project.

21. Aside from external auditing, the executing agency needs to strengthen its internal auditing structure and practices. The capacity development component may be used to strengthen internal auditing capacity of the executing agency. The specific scope will be identified by the need assessment.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Procurement of Goods, Works and Consulting Services

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

23. **EPC contract.** The Executing Agency will employ a single EPC turnkey contractor to construct the CCGT power plant I in Talimarjan TPP. The procurement will follow International Competitive Bidding procedures using ADB's two-stage bidding method. ADB's standard bidding documents for *Plant: Design, Supply, Install* will be used. The EPC contract will incorporate incentive and disincentive clauses to expedite timely execution of the contract acceptable to ADB.

24. **Procurement of works and equipment under Capacity Development Program.** International competitive bidding procedures will be used for civil works contracts valued at \$1 million and above and for supply contracts valued at \$500,000 and above. For civil works and goods contracts valued at \$100,000 or less, shopping procedures may be used.

25. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages, is in Section C.

26. **Consulting Services.** All consultants will be recruited according to ADB's Guidelines on the Use of Consultants.⁴ Quality- and cost-based selection (QCBS) method will be the default method for recruiting consulting firms with a standard quality:cost ratio of 80:20. ADB's prior approval is needed for determining the selection method. Individual consultants may be engaged for specific assignments with prior approval of ADB. The terms of reference for all consulting services are detailed in Section D.

27. **Project implementation and supervision consultant.** The executing agency will employ a project implementation and supervision consultant (an international engineering firm with experience in CCGT technology). This consultant will provide technical, financial and administrative support to the PMU during entire project implementation period. Outline terms of reference (TOR) for this consultant is in Section D. The Executing Agency will prepare the detailed TOR that is acceptable to ADB. ADB OCR loan proceeds will cover the cost of the project implementation and supervision consultant.

28. **Capacity development program consultant.** The executing agency will employ a consultant to assess the capacity development needs and design a suitable program. The activities will be financed through the ADB's ADF loan.

⁴ 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/>

B. Procurement Plan

Basic Data

Project Name: TALIMARJAN POWER PROJECT			
Country: UZBEKISTAN		Executing Agency: SJSC UZBEKENERGO	
Loan Amount: \$340 million (OCR), \$10 million (ADF)		Loan Nos: L2629 (OCR), L2630 (ADF), L8244 (JICA)	
Date of First Procurement Plan: November 2009	Date of this Procurement Plan: 16 March 2010		

1. Process Thresholds, Review and 18-Month Procurement Plan

a. Project Procurement Thresholds

29. 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
International Competitive Bidding (ICB) for Works	Above \$1 million
International Competitive Bidding for Goods	Above \$500,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000

b. ADB Prior or Post Review

30. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
Shopping for Works	Prior	
Shopping for Goods	Prior	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

c. Goods and Works Contracts Estimated to Cost More Than \$500,000

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

General Description	Contract Value	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
EPC Contract for the Power Plant	\$900 mil.	ICB Two-stage bidding method	No P/Q	Q1 2011	
Equipment/System (Capacity Development)	\$3 mil.	In accordance with ADB's <i>Procurement Guidelines</i>			Precise Scope to be developed by assessment need
Community service facility	\$1.5 mil.	Government procured	-	-	Entirely Financed by Uzbekenergo

d. Consulting Services Contracts Estimated to Cost More Than \$100,000

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

General Description	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Implementation consultant	\$9 mil.	QCBS with quality:cost ratio 80:20	Q2 2010	Both international and national assignment	
Capacity Development consultants	\$5 mil.	QCBS with quality:cost ratio 80:20	Q4 2010	Both international and national assignment	Precise TOR to be developed by assessment need
External audit (Capacity Development)	\$1 mil.	Least-Cost Selection			

e. Goods and Works Contracts Estimated to Cost Less than \$100,000 and Consulting Services Contracts Less than \$100,000

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

General Description	Value of Contracts (cumulative)	Number of Contracts	Procurement / Recruitment Method	Comments
Individual consultant (Assessment need for Capacity Development)	\$0.1 mil.	One		

2. Indicative List of Packages Required Under the Project

34. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project.

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
EPC Contract	\$900 mil.	1	ICB (Two-Stage Bidding)	No	ADB <i>Procurement Guidelines</i> apply
Community service facility	\$1.5 mil.	1	Government financed and procured	-	Entirely Financed by Uzbekenergo
Equipment/System Capacity Development	\$3 mil.	Several	ICB/Shopping in accordance with ADB's <i>Procurement Guidelines</i>	-	ADB <i>Procurement Guidelines</i> apply
Project Implementation and Supervision Consultant	\$9 mil.	1	QCBS (International and National)	Full Technical Proposal	ADB's <i>Guidelines or the Use of Consultants</i> apply
Individual consultant (Assessment need for Capacity Development)	\$0.1 mil.	1			ADB's <i>Guidelines or the Use of Consultants</i> apply
Capacity Development consultants	\$5 mil.	Several	QCBS (International/National)	In accordance with ADB's <i>Guidelines or the Use of Consultants</i>	ADB's <i>Guidelines or the Use of Consultants</i> apply
External audit (Capacity Development)	\$1 mil.	Several	Least-Cost Selection	In accordance with ADB's <i>Guidelines or the Use of Consultants</i>	ADB's <i>Guidelines or the Use of Consultants</i> apply

C. Outline Terms of Reference for Project Implementation Consultant

1. Background

35. This outline terms of reference (TOR) relates to the Talimarjan Power Project (the Project). The Project will expand power generation capacity by using combined cycle gas turbine (CCGT) technology. Two CCGT units (370-450 MW) will be constructed at the

Talimarjan Thermal Power Plant (TPP). Construction will be done by an engineering, procurement and construction (EPC) contractor.

36. SJSC Uzbekenergo intends to procure a single EPC turnkey contractor to build the 2 CCGT units. The contractor will be responsible for design, supply, delivery, erection, testing, and commissioning. The contractor is scheduled to be mobilize in mid 2011. A project preparatory consultant has been recruited under ADB technical assistance funding to assist SJSC Uzbekenergo in preparing bidding documents and conducting tender evaluation for the CCGT units. This consultant's role will cease at award of turnkey contract.

37. SJSC Uzbekenergo now wishes to recruit an implementation consultant. The Implementation Consultant will assist Uzbekenergo in assuring that the project is constructed to the specified standard, completed on schedule and with costs monitored and controlled. The consultant's role will cover design audit and construction supervision of the contractors' works, issue of necessary progress reports and payment certificates and general project management.

2. Scope of Work

a. Project Management

38. The consultant will prepare necessary project plans, progress reports, payment certificates, provisional and final take over certificates, claims evaluation reports, project final report and any other project management documents as required in accordance with good practice and Uzbekenergo and ADB requirements.

39. The consultant will assist Uzbekenergo Project Management Unit (PMU) in preparing and implementing a Project Performance Monitoring System (PPMS) to evaluate effectiveness of the project. The PPMS will measure project performance against the parameters as set out in the Design and Monitoring Framework (DMF) of the Report and Recommendation of the President. The PPMS will establish baseline data and benchmarks, collect necessary information, monitor progress, identify benefits and evaluate social impact.

b. Design Audit and Construction Supervision

40. The turnkey contract will cover design and construction of the new power plant facilities. The consultant will provide oversight of all aspects of the turnkey contractor's works. This will include i) review and approval of the contractor's designs, ii) developing and implementing a construction quality assurance program, iii) monitoring contractor's schedule, iv) inspection of materials before shipment upon arrival and upon erection, v) comparison of as-built drawings to design, vi) and addressing shortcomings in any of these areas.

c. Testing and Commissioning

41. For each component subject to test, the consultant will review the contractor's test procedures for compliance with manufacturers' requirements and design criteria. The consultant will witness selected tests and review the test results.

42. When the power plant is to generate power, Uzbekenergo will initiate operational activities. The contractor will provide training on the operation of the power plant and all its systems. The consultant will assist Uzbekenergo in this phase of the project and coordinate as required with the contractor.

d. Training and Capacity Development

43. The consultant will work with Uzbekenergo counterpart staff and provide capacity development through on the job training. In this regard it is envisaged that Uzbekenergo will appoint counterpart staff to work with consultant's key specialists. The consultant will also provide specific capacity development and training to environmental, project financial control and social & gender specialists working in Uzbekenergo's PMU. This specific training will be designed to ensure that proper project financial controls are exercised and that environmental management plan and social & gender action plan as specified in the project agreements are implemented.

3. Qualifications of the Firm

44. The Firm shall have provided consulting engineering services involving design audit and construction supervision on at least two CCGT projects in the last 5 years which used gas turbines of at least 200MW class.

4. Indicative Qualifications of Personnel and Individual Tasks

Position	Qualifications For all Positions previous experience in developing countries in the region is desirable.	Tasks
Team Leader	<ul style="list-style-type: none"> • University degree in engineering • 20 years of consulting experience in design and project management of major power plant projects. • 10 years experience as a team leader on CCGT projects which shall include gas turbines of at least 200 MW class. 	<ul style="list-style-type: none"> • Develop a comprehensive project work program and implementation schedule • Monitor project progress against plan, report on progress and propose remedial measures as necessary • Coordinate activities of consultant team including both field and home office staff • Ensure contractor's designs and works are executed in line with project requirements • Develop and maintain a project safety plan. Ensure compliance with plan. • Develop and maintain a project Quality Assurance plan. Ensure compliance with plan
Mechanical Engineer	<ul style="list-style-type: none"> • University degree in engineering • 15 years of consulting experience in design and project management of major power plant projects. • 10 years experience as a team member on CCGT projects which shall include gas turbines of at least 200 MW class. 	<p>In functional area of responsibility:</p> <ul style="list-style-type: none"> • Review contractors design submissions • Supervise contractors works • Monitor progress against plan • Certify progress payments • Ensure training of client counterpart staff through on-the-job training and classroom training programs • Ensure adherence to project safety plan • Certify As-Built drawings • Ensure adequacy of operation and maintenance manuals

Position	Qualifications	Tasks
Electrical Engineer	As above	As Above
Control & Instrumentation Engineer	As Above	As Above
Civil Engineer	<ul style="list-style-type: none"> • University degree in engineering • 15 years of consulting experience in design and project management of major infrastructure projects to include at least one power plant project 	As Above
Commissioning Engineer	<ul style="list-style-type: none"> • University degree in engineering • 15 years of consulting experience in design and project management of major power plant projects. • 10 years experience as a team member on CCGT projects which shall include gas turbines of at least 200 MW class. • 5 Years experience as commissioning engineer on CCGT power plant 	<ul style="list-style-type: none"> • Develop an inspection and testing plan covering factory and site tests • Review contractors testing and commissions submissions • Supervise testing and commissioning as required • Ensure training of client counterpart staff through on-the-job training and classroom training programs • Ensure adherence to project safety plan • Ensure adequacy of operation and maintenance manuals • Establish and maintain a documentation system to records of all correspondence between the PMU, contractors, consultant and ADB.
Environmental Specialist	<ul style="list-style-type: none"> • Master's degree in Environmental Engineering/Science • 10 years experience in carrying environmental studies of infrastructure projects and ensuring their delivery 	<ul style="list-style-type: none"> • Ensure compliance with existing Environmental Management Plan • Ensure training of client counterpart staff through on-the-job training and classroom training programs • Assist PMU environmental specialist
Social and Gender Specialist	<ul style="list-style-type: none"> • Master's degree in sociology • 10 years experience in carrying out social development activities associated with major infrastructure projects. 	<ul style="list-style-type: none"> • Ensure compliance with existing Social & Gender Plan • Ensure training of client counterpart staff through on-the-job training and classroom training programs • Assist PMU Social & Gender specialist
Contract Administrator	<ul style="list-style-type: none"> • A university degree or professional qualification in accounting and/or business • 15 years experience as 	<ul style="list-style-type: none"> • Prepare an overall project disbursement plan, monitor costs, and maintaining project accounts in compliance with accounting standards acceptable to ADB.

Position	Qualifications	Tasks
	contract administrator on major infrastructure projects	<ul style="list-style-type: none"> • Develop payment certification procedures • Assist PMU in preparation of Withdrawal Applications and disbursement projections • establish a computerized monitoring program using off-the-shelf software packages • Evaluate contractor claims for additional costs and extensions of time. • Assist the PMU in preparation of Variation Orders • Assist PMU in preparation Request for Proposals for additional consulting services as required
Home Office Support	University and/or professional qualifications covering the relevant specialty.	<ul style="list-style-type: none"> • Provide specialized technical support as required • Attend factory inspections in accordance with inspection plan

5. National Consultants

45. International consultants will be supported by national consultants. All national consultants will have at least a bachelor's degree from an established university in Uzbekistan or other countries and two years of experience in their area of expertise.

6. Level of Effort of Team of Consultants

46. It is expected that about 260 person-months of international consulting services will be needed from a firm specializing in project management, design audit and construction supervision of CCGT power plants. The consultant will be supported by about 210 person-months of national consulting services with expertise in similar areas. Table 1 shows the indicative positions and their person-months.

Table 1: Indicative Positions and Person-Months

Particular	International Consultants Person Months	National Consultants Person Months
Team Leader	38	-
Mechanical Engineer	38	42
Electrical Engineer	38	42
C&I Engineer	38	42
Civil Engineer	24	24
Commissioning Engineer	12	12
Environmental Engineer	6	4
Social and Gender Specialist	6	2
Contract Administrator	38	42
Home Office Support	24	-
Totals	262	210

7. Output and Reporting Requirements

47. The firm will work closely with the Uzbekenergo's Project Management Unit and the the ADB Project Officer.

48. The key outputs and reports are as follows:

#	Activity	Due by Month #
1	Inception Report	1
	Progress Report	Quarterly
	Project Completion Report	Project Completion
2	Project Work Program and Implementation Schedule	3
3	Project Performance Measuring System	3
4	Safety Plan	3
5	Quality Assurance Plan	3
6	Counterpart Training Plan	6
7	Withdrawal Applications	As required
8	Claims Evaluation	As required

D. Outline Term of Reference for Capacity Development Consultants

1. Objective

49. The objective of the Capacity Development Program (CDP) is to support Uzbekenergo in strengthening its management, operations and performance. The CDP (2011-2013) will focus on the following areas, they are: (i) corporate management, (ii) financial management systems and audit capabilities, (iii) operation and maintenance of CCGT power plants, and (iv) social and gender aspects. A comprehensive needs assessment will be undertaken by Uzbekenergo with assistance of experts to determine the detailed scope and schedule of activities. The Project will cover relevant hardware, software, training and consulting services.

2. Guiding Principles and Approach

50. To accelerate knowledge transfer of best practices with some economy of scale, the CDP will be formulated and implemented in a cost effective manner. In order to ensure a wide coverage of beneficiaries, the CDP will include specific measures to enable women and other vulnerable groups to participate in the training programs developed under this component.

51. Keeping these objectives and guiding principles in view, the CDP will begin with a sector-wide needs assessment to analyze the gap between the current institutional capacity and international benchmarks and standards for power utilities. The needs assessment will identify priorities of the CDP with specific scope and time schedule to be determined in consultation with Uzbekenergo and other stakeholders.

3. Priority Areas for Capacity Development Program

52. Subject to refinement based on the proposed needs assessment, the priority areas of the CDP should include: (i) corporate management, (ii) financial management systems and audit capabilities, (iii) operation and maintenance of CCGT power plants, and (iv) social and gender aspects. The brief outline of the terms of reference for each program is presented below.

a. Corporate Management Capacity Development

53. The proposed corporate management capacity development aims at strengthening the corporate management practices of Uzbekenergo. The program will focus on providing management advisory and training on the following aspects:

- (i) Corporate strategy and business planning: Properly identified corporate vision, strategy, and business plan that are well disseminated and accepted by both the internal and external stakeholders will improve corporate management and performance.
- (ii) Internal check and balance strengthening: while the present internal control may be functional, the corporate structure can be further modernized with increased transparency and strengthened internal check and balance mechanism (between the board and the management, and with the establishment of proper internal audit function).
- (iii) Public relations and social responsibility: Interaction with outside stakeholders needs strengthening through building capacity in public relations and social responsibility. Image control and public confidence are important in facilitating revenue collection activities.

54. **Estimated cost and Person- Months.** It is envisaged that the experts input needed for undertaking the corporate management will be about 15 person months of international consultants and about 10 person months of domestic consultants for a total cost of about \$1.0 million.

b. Financial Management and Audit Capacity Development

55. The proposed financial management capacity development program aims at supporting Uzbekenergo through training in International Financial Reporting Standards (IFRS), internal auditing and foreign exchange risk management. This would involve the following activities:

- (i) **Accounting capacity:** training key accounting staff to provide them with a broad understanding of the differences between National Accounting Standards (NAS) and IFRS. The training should identify the main IFRS standards that Uzbekenergo would need to adopt and include the preparation of a plan to restructure its annual financial statements by implementing IFRS in parallel with NAS.
- (ii) **Internal audit capacity:** a financial consultant who would assist it to establish and operate an internal audit unit. This would involve training of internal audit staff in basic internal audit activities including development of an auditing program and procedures. The consultant should also help set up an initial annual internal audit program and oversight the conduct of the first internal audits including the presentation of a reports to Uzbekenergo's Supervisory Council recommending any appropriate actions by Uzbekenergo management resulting from audits.
- (iii) **Foreign exchange risk management:** a foreign exchange risk management consultant who should assist Uzbekenergo to identify its possible foreign exchange risks in terms of amounts, currencies and exposure and then draw up

a foreign exchange risk management plan. The consultant should provide basic training to key Uzbekenergo staff to enable them to understand key foreign exchange risk management tools and eventually to help Uzbekenergo actively manage those risks.

56. **Estimated Cost and Person-Months.** It is envisaged that the experts input needed for undertaking the financial management and audit program will be about 80 person months of international consultants and about 30 person months of domestic consultants for a total cost of about \$3.5 million. Based on the completion of the above noted capacity development program, Uzbekenergo is expected to replicate and introduce modernization of financial management and reporting system in its other subsidiaries.

c. Operational and Maintenance Program

57. Uzbekenergo will recruit an Operation and Maintenance (O&M) consultant to provide advice on appropriate O&M practices and procedures to be instituted at its organization. The role of the consultant will be to assist Uzbekenergo in developing an overall O&M strategy for the three new CCGT power plants, advise on organization structures, spares holding and maintenance practices, and produce necessary manuals. A brief outline of the TOR is presented below.

58. The Consultant will undertake the following tasks: (i) assess Uzbekenergo CCGT O&M capacity and skills level and identify necessary institutional and capacity building measures. Capacity building options to be considered shall include (a) specialist training by the CCGT equipment suppliers, (b) need for contractor's specialist staff to provide on the ground and/or remote advisory services, and (c) non equipment specific O&M training to be provided in UZB and/or overseas; (ii) Propose a maintenance strategy appropriate for Uzbekenergo's CCGT fleet. Recommend appropriate maintenance activities to be carried out by Uzbekenergo staff and what activities, if any, should be outsourced; (iii) Propose a spares holding strategy appropriate for Uzbekenergo's CCGT fleet. Strategy should consider (a) optimum level of spares to be held in Uzbekistan, (b) option of outsourcing spares holding to manufacturers, and (c) option of joining a users group to pool spares; (iv) Identify industry best practice regarding how utilities enter into Long Term Service Agreements (LTSA) with manufacturers. Study and recommend appropriate form of LTSAs for Uzbekenergo. (v) Propose an appropriate O&M organization structure for Talimarjan, Navoi and Tashkent CCGT plants. Recommend which activities should be allocated to specific plants and which could be centralized into a CCGT service group; and (vi) Provide on the job training to Uzbekenergo counterpart staff who will work with the consultant's team.

59. **Estimated Cost and Person-Months.** It is expected that about 20 person-months of international consulting services will be needed from a firm specializing in operations and maintenance of CCGT power plants. Experience of O&M of gas turbines of over 200MW capacity is required. The total cost of the operational and maintenance capacity development program is estimated at about \$ 1.0 million.

d. Social and Gender Capacity Development

60. This capacity development program will focus on providing advisory to the Uzbekenergo's management in the area of social and gender consideration. It also conducts gender awareness training at Uzbekenergo, and help EA produce manuals for social and gender consideration in project formulation and in utility operations.

61. **Estimated cost and Person- Months.** It is envisaged that the experts input needed for undertaking the social and gender management capacity development will be about 10 person months of international consultants and about 20 person months of domestic consultants for a total cost of about \$0.5 million.

VII. SAFEGUARDS

62. **Environment.** Environmental management plan (EMP), drafted in the environmental impact assessment, will be finalized and implemented by the PMU.

63. **Social and Gender.** Community and Gender Strategy Action Plan will be implemented by the PMU.

**A. Environmental Management Plan for Talimarjan Power Project
(PLEASE SEE THE EMP INCLUDED IN ENVIRONMENTAL IMPACT ASSESSMENT.)**

**B. Community and Gender Action Plan for Talimarjan Power Project
[PLEASE SEE LINKED DOCUMENT 10.]**

VIII. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Design Summary	Performance Targets and Indicators with Baseline	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved energy security and increased regional energy trade	<p>Thermal power generation efficiency improved from 31% (2009) to 50% by 2015</p> <p>GHG emissions reduced by 1.2 mtCO₂e by 2014 from 3.5 mtCO₂e (baseline)</p> <p>Power transmission capacity between north and south increased from 1,600 MW (2009) to 2,200 MW (2014)</p> <p>Power exports to Afghanistan and neighboring countries increased from about 1 TWh (2009) to 3 TWh (2014)</p>	<p>Government economic statistics and reports</p> <p>National statistics on power supply</p> <p>Government integrated energy sector statistics</p>	Assumptions <p>Government continues to support power sector development and reform plans</p> <p>Stable economic growth in the region</p> <p>A sustainable power trade framework is realized between Uzbekistan and its neighbors</p>

Design Summary	Performance Targets and Indicators with Baseline	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Outcome Energy efficiency improved, regional connectivity enhanced, and customers receive reliable and quality power supply</p>	<p>Base load generating capacity expanded by 800 MW by 2014 from 10,000 MW (2009)</p> <p>4.7 TWh of clean power supplied to customers annually starting in 2015</p> <p>570 MW of inefficient thermal generating capacity retired by 2016</p> <p>Uzbekenergo adopts international standards in corporate and financial management by 2013</p> <p>Uzbekenergo sales increase from 40 TWh (2009) to 45 TWh (2015)</p>	<p>Uzbekenergo annual report</p> <p>CDC reports</p>	<p>Assumptions Electricity tariffs regularly adjusted to cover costs</p> <p>Uzbekenergo improves its billing and collection</p> <p>Public entities pay for their power consumption on time</p> <p>Power demand grows 2%–3% per annum</p> <p>Reliable and sufficient gas supply to Talimarjan TPP</p> <p>Planned generation expansion projects commissioned by 2015</p> <p>Risks Delays in the commissioning of the 500 kV substation in Talimarjan and 500 kV power transmission line connecting Talimarjan with Sogdiana</p>

Design Summary	Performance Targets and Indicators with Baseline	Data Sources and Reporting Mechanisms	Assumptions and Risks
Outputs Two CCGT units in Talimarjan TPP commissioned Uzbekenergo corporate management and performance improved	Both CCGT units (370-450 MW each) are operational by 2014 Uzbekenergo adopts an enhanced financial management system by 2012 Uzbekenergo practices international auditing standards and accounting practices by 2012 Talimarjan TPP management and operational staff undergo CCGT operations and maintenance training program by 2013	EPC contractor's commissioning certificates Uzbekenergo's progress reports Trainer's program reports	Assumptions Government complies with ADB safeguard policies during construction Effective cooperation between EPC contractor and government entities Counterpart funds made available Risks Delays in procurement of the EPC contractor Cost overruns due to unforeseen circumstances in
Activities with Milestones 1.1 Uzbekenergo prepares environmental impact assessment by December 2009 1.2 Uzbekenergo prepares community and gender action plan by January 2010 1.3 ADB recruits consultants to prepare bidding documents and evaluate bids by April 2010 1.4 Uzbekenergo recruits implementation consultant by April 2011 1.5 Uzbekenergo awards EPC contract by June 2011 1.6 EPC contractor commissions the first CCGT unit by March 2014 1.7 EPC contractor commissions the second CCGT unit by December 2014 2.1 A consultant completes capacity needs assessment of Uzbekenergo by September 2010 2.2 Key training program starts by March 2011		Inputs ADB: \$350,000,000	
		Item	Amount (\$ million)
		CCGT power plant	331
		Implementation Consultant	9
		Capacity Development	10
		Government:	230
		Item	Amount (\$ million)
		Taxes and Duties	230
		Cofinanciers:	
		JICA:	300
UFRD:	250		
Uzbekenergo:	150		
Item	Amount (\$ million)		
CCGT power plant	698.5		
Community service center	1.5		

ADB = Asian Development Bank; CCGT = combined cycle gas turbine; CDC = coordinating dispatch center; EPC = engineering, procurement, and construction; GHG = greenhouse gas; JICA = Japan International Cooperation Agency; kV = kilovolt; mtCO₂e = million ton of carbon

dioxide equivalent; MW = megawatt; TPP = thermal power plant; TWh = terawatt-hour; UFRD = Fund for Reconstruction and Development of the Republic of Uzbekistan.

Source: Asian Development Bank.

B. Monitoring

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

- Installed generation capacity by power plants (MW)
- Installed transmission line by kV (km)
- Power supply by power plants and power consumption by region and type (GWh/year)
- System losses (commercial and technical, and transmission and distribution) (%)
- Power transformer capacity (MVA)
- Power tariff structure and level (sum/kWh)
- Power trade volume (GWh/year) and amount (\$ million) by country
- SJSC Uzbekenergo's annual report and financial statements (incl. balance sheet/cash-flow/income statement)

65. **Compliance monitoring:** Loan covenants — policy, legal, financial, economic, environmental, and others — will be monitored through semi-annual project meeting and the midterm review.

66. **Safeguards monitoring:** Executing agency's quarterly progress reports, Environmental Management Plan (EMP), semi-annual environmental reports

67. **Poverty and Social action plans:** Executing agency's quarterly progress reports, and through semi-annual project meeting and the midterm review

C. Evaluation

68. Within 6 months of physical completion of the Project {the executing agency} will submit a project completion report to ADB.⁵

D. Reporting

69. The executing agency will provide ADB with (i) quarterly progress reports, which include Environmental Management Plan, in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6 months of physical completion of the Project. To ensure projects continue to be both viable and sustainable, project accounts and the executing agency AFSs, together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

70. Project information will be strategically disseminated through media at main milestones

⁵ Project completion report format available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

including loan signing, EPC contract awards and project completion. Grievance redress mechanism will establish at the project site gate, by phone and email, and through public consultation events.

IX. ANTICORRUPTION POLICY

71. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project.⁶ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.⁷

72. To support these efforts, relevant provisions are included in the loan agreements/regulations and the bidding documents for the Project. Procurement will follow ADB's Procurement Guidelines, consultant selection will adopt ADB's Guidelines on the Use of Consultants, and disbursement will be made in accordance with ADB's disbursement policies, guidelines, practices, and procedures.

X. ACCOUNTABILITY MECHANISM

73. People who are, or may in the future be, adversely affected by the project may address complaints to ADB, or request the review of ADB's compliance under the Accountability Mechanism.⁸

XI. RECORD OF PAM CHANGES

- November 2009: 1st version completed.
- January 2010: 2nd version completed.
- June 2010: 3rd version completed.
- June 2012: 4th version completed.
- November 2013: 5th version completed.

Date Updated	PAM Section	Change	Appendix
2 June 2010	III. C. Project Organization Structure	Added PMU positions.	1
30 April 2012		Changed PMU positions and staffing.	
31 March 2013			
2 June 2010	VIII. D. Reporting	To be consistent with Section 2.06 (c) of the Project Agreement, para 69 of the PAM to be read as "The executing agency will provide ADB with ... (iii) a project completion report within 3 months of physical completion of the project, or such later date as ADB may agree ..."	-

⁶ Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

⁷ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

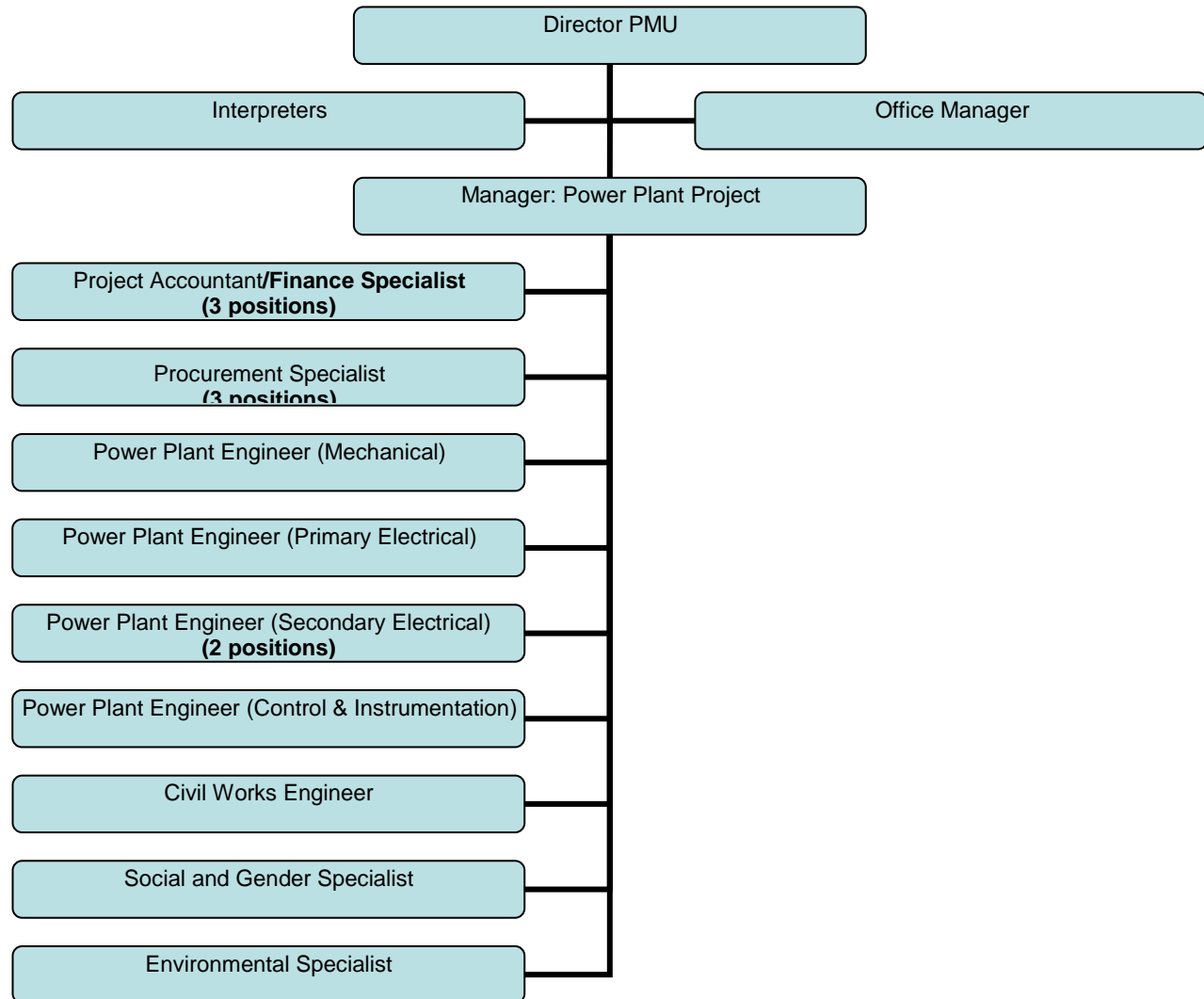
⁸ For further information see: <http://compliance.adb.org/>.

Date Updated	PAM Section	Change	Appendix
20 Oct 2011	VIII.A. Project Design and Monitoring Framework	Refined DMF	2
30 April 2012	II. B. Overall Project Implementation Plan	Revised.	3
26 April 2013	III. B. Key Persons Involved in Implementation	Revised.	4
30 April 2012	IV.E. Expenditure Accounts by Year, and IV.F. Contract and Disbursement S-curve	Revised projections according to revised project implementation schedule.	5
30 April 2012	VI. B. Procurement Plan	Updated	6
7 June 2013			
15 Nov 2013			
18 March 2013	IV. Costs and Financing	Revised cost estimates after revising financing percentages for the turnkey contract	7

UPDATED PROJECT MANAGEMENT UNIT (PMU) STRUCTURES

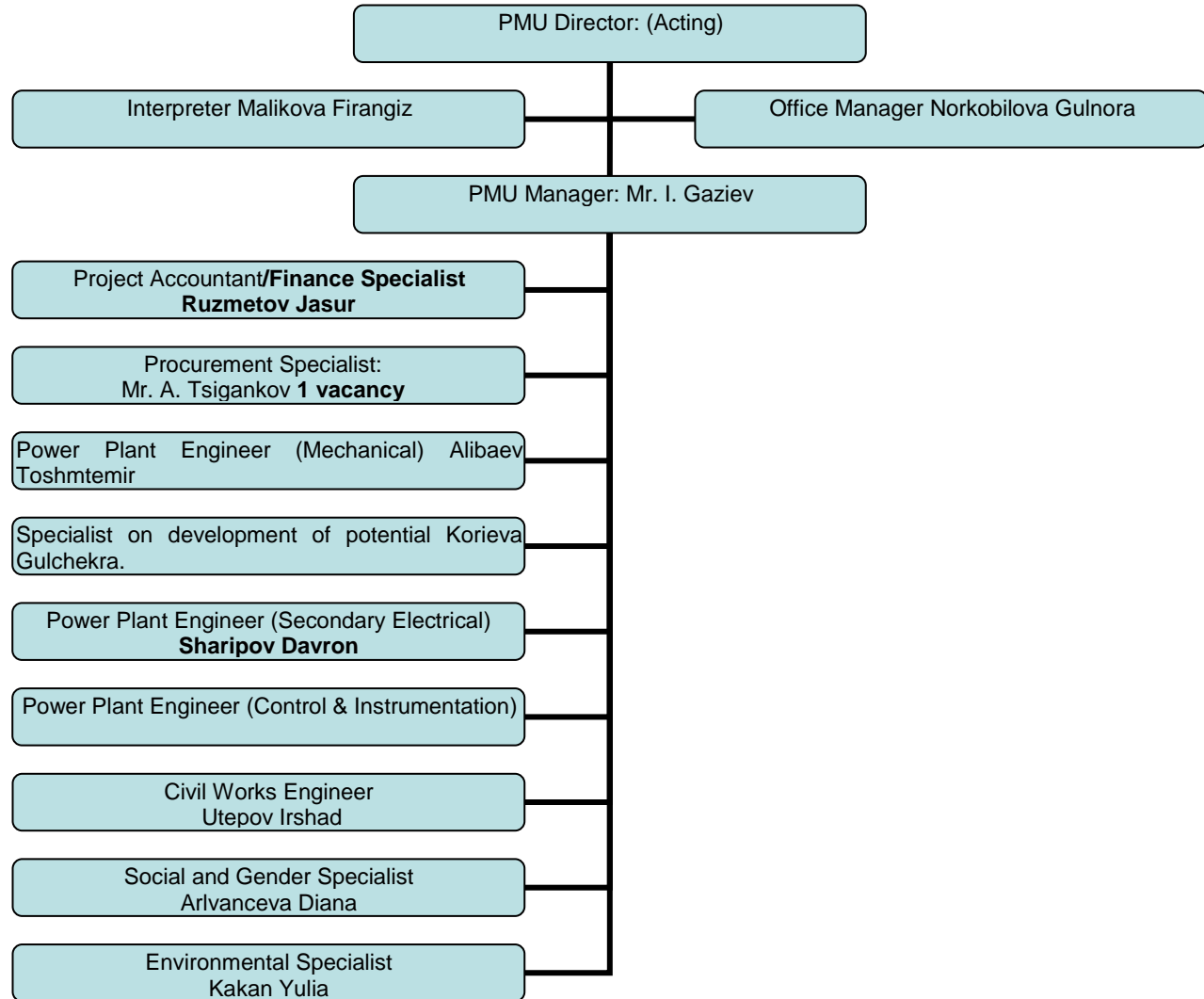
A. PMU as of 2 June 2010

1. Below is the revised project management unit (PMU) structure which includes new positions identified by the PMU during the ADB Inception Mission in May 2010.



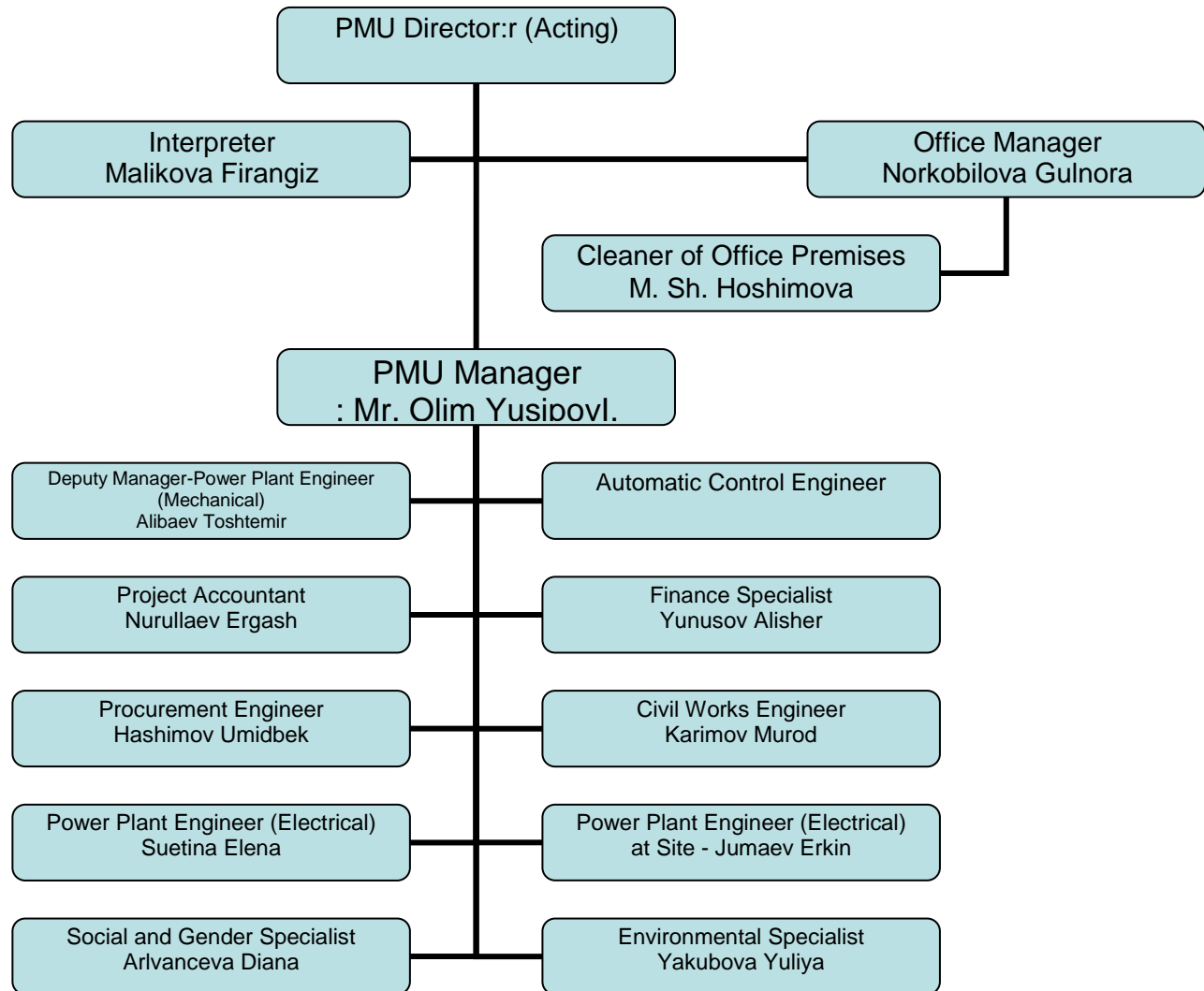
B. PMU as of April 2012

2. Below is the revised PMU structure reported by the PMU during the Special Administration Mission in April 2012.



C. PMU As of 31 March 2013

3. Below is the revised PMU structure reported by the PMU in their quarterly progress report as of 31 March 2013.



REFINED DESIGN AND MONITORING FRAMEWORK (DMF)

Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
Impact Improved energy security	GHG emissions reduced by 1.2 mtCO ₂ e by 2014 from 3.5 mtCO ₂ e (2009) Power transmission capacity between north and south increased from 1,600 MW (2009) to 2,200 MW (2015) Power exports to Afghanistan and neighboring countries increased from about 1 TWh (2009) to 3 TWh (2015) Uzbekenergo sales increase from 40 TWh (2009) to 45 TWh (2015)	Government economic statistics and reports Government integrated energy sector statistics National statistics on power supply CDC reports	Assumptions Government continues to support power sector development and reform plans. Stable economic growth in the region PPAs between Uzbekistan and importing countries enforced. Risk Security uncertainties in any of the countries involved for the power trade
Outcome Increased energy-efficient power generation capacity	Base load generating capacity expanded by 800 MW by 2014 from 10,000 MW (2009) 4.7 TWh of clean power supplied to customers annually starting in 2015 Thermal power generation efficiency improved from 31% (2009) to 50% by 2015 570 MW of inefficient thermal generating	Uzbekenergo annual report CDC reports Uzbekenergo's technical database CDC reports	Assumptions Electricity tariffs regularly adjusted to cover costs Uzbekenergo improves its billing and collection Public entities pay for their power consumption on time Power demand grows 2%–3% per annum Reliable and sufficient gas supply to Talimarjan TPP

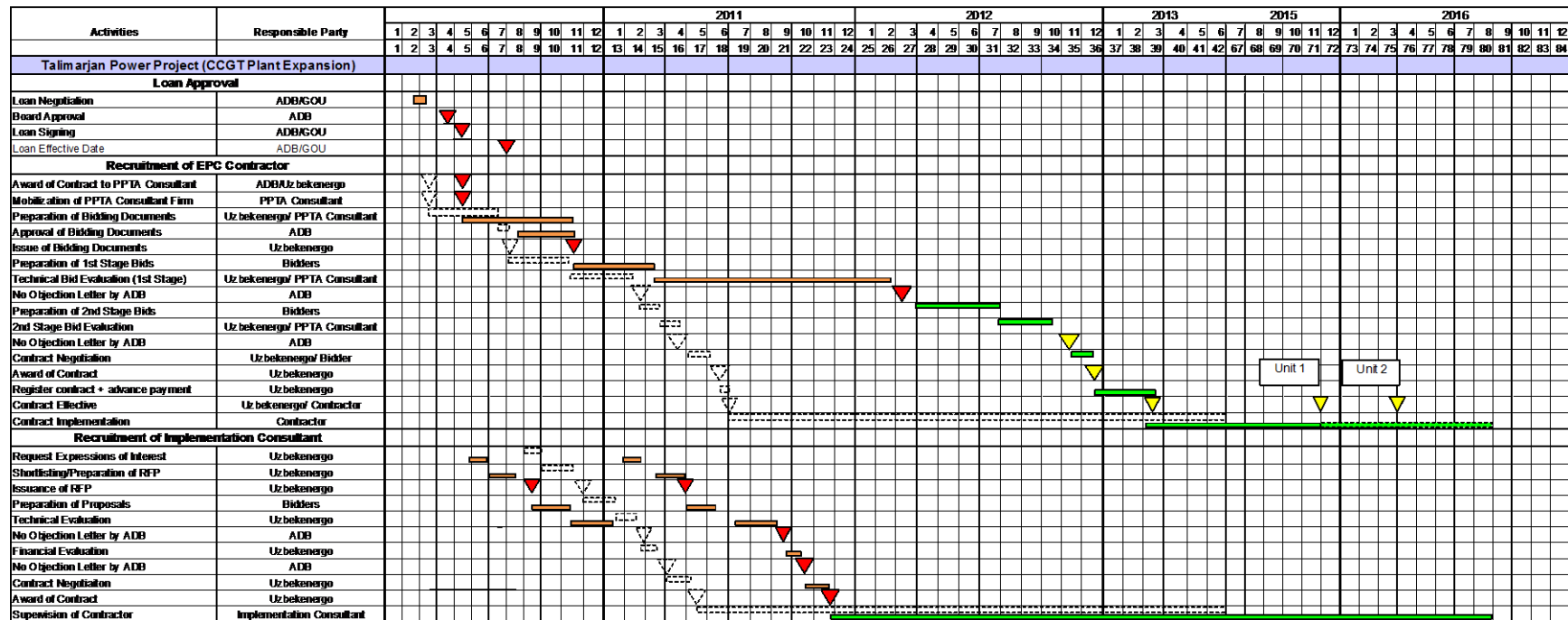
Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
	capacity retired by 2015		<p>Planned generation expansion projects commissioned by 2015</p> <p>Risk Delays in the commissioning of the 500 kV substation in Talimarjan and 500 kV power transmission line connecting Talimarjan with Sogdiana</p>
<p>Outputs Energy-efficient generating plants installed</p> <p>Uzbekenergo corporate management and performance improved</p>	<p>Two new CCGT units (370-450 MW each) are operational by 2014</p> <p>Uzbekenergo adopts an enhanced financial management system by 2012.</p> <p>Uzbekenergo practices international auditing standards and accounting practices by 2012.</p>	<p>Operational acceptance letters by Uzbekenergo</p> <p>Uzbekenergo's progress reports</p> <p>Uzbekenergo's financial reports</p> <p>Trainer's program</p>	<p>Assumptions Effective cooperation between EPC contractor and government entities</p> <p>Counterpart funds made available</p> <p>Government complies with ADB safeguard policies during construction</p> <p>Risk Cost overruns due to unforeseen circumstances in the international market</p> <p>Assumption Continued management commitment to performance improvements</p> <p>Risk Limited number of competent and established</p>

Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
Community service center is operational	<p>At least 20 Talimarjan TPP management and operational staff undergo CCGT operations and maintenance training program by 2013.</p> <p>Community and gender action plan implemented by 2013</p> <p>Service center is fully operational by 2013, with full operational structure (staff, budget and workplan)</p>	<p>reports</p> <p>Uzbekenergo's progress reports</p> <p>Uzbekenergo's progress reports</p>	<p>accountants and auditors in Uzbekistan</p> <p>Assumption Counterpart funds made available</p>
Activities with Milestones Energy-efficient generating plants installed			Inputs OCR-\$340,000,000 ADF-\$ 10,000,000 Government – \$630,000,000 JICA-\$300,000,000
Activity	Scheduled Start	Scheduled Finish	
1.1 Uzbekenergo prepares environmental impact assessment by December 2009	Oct 31, 2009	Dec 31, 2009	
1.2 ADB recruits consultants to prepare bidding documents and evaluate bids by April 2010	Nov 30, 2009	Apr 30, 2010	
1.3 Uzbekenergo recruits implementation consultant by October 2011	Jun 01, 2010	Oct 31, 2011	
1.4 Uzbekenergo awards EPC contract by December 2011	Mar 31, 2010	Dec 31, 2011	
1.5 EPC contractor commissions the first CCGT unit by May 2014	Mar 01, 2014	May 31, 2014	

Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions and Risks
1.6 EPC contractor commissions the second CCGT unit by December 2014	Dec 01, 2014	Dec 31, 2014	
Uzbekenergo corporate management and performance improved			
Activity	Scheduled Start	Scheduled Finish	
2.1 A consultant completes capacity needs assessment of Uzbekenergo by January 2012	Oct 15, 2011	Jan 31, 2012	
2.2 Key training program starts by June 2012	Jun 01, 2012	Jun 30, 2012	
Community service center is operational			
Activity	Scheduled Start	Scheduled Finish	
3.1 Uzbekenergo prepares community and gender action plan by December 2011	Jul 01, 2010	Dec 31, 2011	
3.2 Uzbekenergo awards community service center contract by December 2011	Jul 01, 2011	Dec 31, 2011	
3.3 Uzbekenergo begins operations of community service center by December 2012	Dec 01, 2012	Dec 31, 2012	
3.4 Uzbekenergo implements community and gender action plan by December 2013	Jan 01, 2013	Dec 31, 2013	

ADB = Asian Development Bank; ADF = Asian Development Fund; CCGT = combined cycle gas turbine; CDC = coordinating dispatch center; EPC = engineering, procurement, and construction; GHG = greenhouse gas; JICA = Japan International Cooperation Agency; kV = kilovolt; mtCO₂e = million ton of carbon dioxide equivalent; MW = megawatt; OCR = ordinary capital resources; TPP = thermal power plant; TWh = terawatt-hour.

REVISED OVERALL PROJECT IMPLEMENTATION PLAN



REVISED KEY PERSONS INVOLVED IN PROJECT IMPLEMENTATION

Executing Agency

Agency Name	Officer's Name: Mr. O. Yusipov
	Position: Project Manager
SJSC Uzbekenergo	Telephone: +99871-236-2262
	Fax: +99871-236-2262
	Email address: grp_tal_tes@mail.ru
	Office Address:
	[Tashkent] 6 Khorezmskaya St., Tashkent, 100000, Uzbekistan
	[Talimarjan] Talimarjan Thermal Power Station, Nuristan Settlement, Nishan Area, Kashkadarya Region, Uzbekistan

ADB

Division Director	Staff Name: Mr. R. Stroem
	Position: Director, Energy and Natural Resources Division, Central and West Asia Department (CWRD/CWEN)
	Telephone No.: +632-632-6356
	Email address: rstroem@adb.org
Mission Leader	Staff Name: Mr. Keiju Mitsuhashi
	Position: Energy Specialist
	Telephone No.: +632-632-5630
	Email address: kmitsuhashi@adb.org

REVISED CONTRACT AND DISBURSEMENT PROJECTIONS

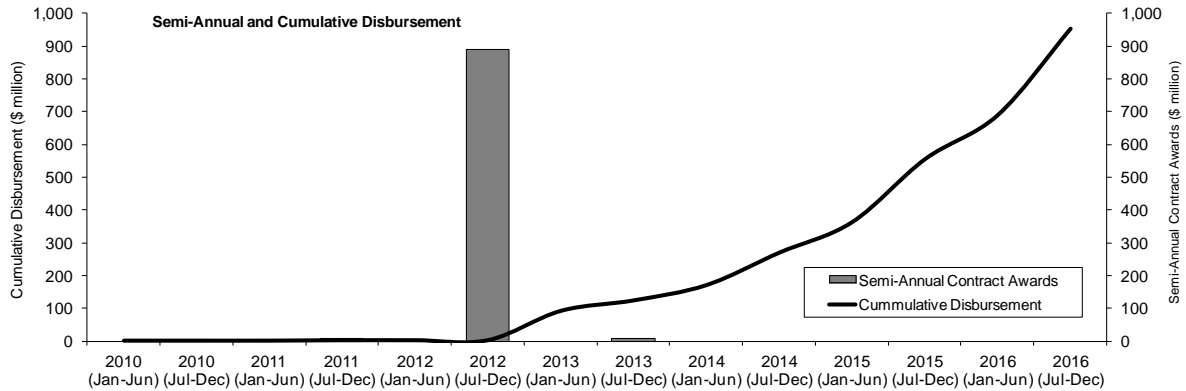
A. Revised Expenditure Accounts by Year

		(\$ million)						
		2010	2011	2012	2013	2014	2015	2016
Item	Total Cost							
A. Investment Costs								
1 EPC Contract/Equipment/Civil Works etc.	891.55	-	-	-	115.90	133.73	267.47	374.45
2 Social Infrastructure	1.50	-	-	-	0.23	0.30	0.45	0.53
3 Implementing Consulting Services	8.61	-	1.29	0.00	1.29	1.29	2.15	2.58
4 Capacity Development (Equipment/Consulting Services)	8.96	-	-	0.09	1.34	4.48	3.05	-
5 Taxes and Duties	230.00	-	0.33	0.02	29.99	35.29	68.98	95.39
Subtotal (A)	1140.62	-	1.62	0.11	148.75	175.10	342.10	472.95
B. Contingencies	96.44	-	-	-	12.54	14.47	28.93	40.50
C. Financing Charges During Implementation	42.94	-	0.03	0.03	2.82	6.10	12.53	21.43
Total Project Cost (A+B+C)	1280.00	-	1.65	0.14	164.11	195.67	383.56	534.88
% Total Project Cost	100%	-	0%	0%	12.8%	15.3%	30.0%	41.8%

EPC=engineering, procurement, construction

Financial charges re-estimated without changing the total original allocation for the category

B. Revised Contract and Disbursement S-curve



UPDATED PROCUREMENT PLANS

A. As of April 2012

1. Process Thresholds, Review and 18-Month Procurement Plan

a. Project Procurement Thresholds

29. 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
International Competitive Bidding (ICB) for Works	Above \$1 million
International Competitive Bidding for Goods	Above \$500,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000

b. ADB Prior or Post Review

30. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
Shopping for Works	Prior	
Shopping for Goods	Prior	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Consultants' Qualification Selection (CQS)	Prior	
Least-Cost Selection (LCS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

c. Goods and Works Contracts Estimated to Cost More Than \$500,000

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

General Description	Contract Value	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
EPC Contract for the Power Plant	\$900 mil.	ICB Two-stage bidding method	No P/Q	Q4 2010	
Equipment/System (Capacity Development)	\$3 mil.	TBD		Q4 2012	Precise scope to be developed by

General Description	Contract Value	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
Community service facility	\$1.5 mil.	Government procured	-	-	assessment need Entirely Financed by Uzbekenergo

d. Consulting Services Contracts Estimated to Cost More Than \$100,000

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

General Description	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Capacity Development consultants	\$5 mil.	QCBS with quality:cost ratio 80:20	Q4 2012	Both international and national assignment	Precise TOR to be developed by needs assessment
External audit	\$0.15 mil.	CQS	Q1 2012	Both international and national assignment	

e. Goods and Works Contracts Estimated to Cost Less than \$100,000 and Consulting Services Contracts Less than \$100,000

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

General Description	Value of Contracts (cumulative)	Number of Contracts	Procurement / Recruitment Method	Comments
Not applicable				

2. Indicative List of Packages Required Under the Project

34. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project. Contracts financed by the Borrower and others should also be indicated, with an appropriate notation in the comments section.

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable/ Technical Proposal	Comments
EPC Contract	\$900 mil.	1	ICB (Two-Stage Bidding)	No	ADB <i>Procurement Guidelines</i> apply
Community service facility	\$1.5 mil.	1	Government financed and procured	-	Entirely Financed by Uzbekenergo
Equipment/System Capacity Development	\$3 mil.	Several	ICB/Shopping in accordance with ADB's <i>Procurement Guidelines</i>	-	ADB <i>Procurement Guidelines</i> apply
Project Implementation and Supervision Consultant	\$8.63 mil.	1	QCBS (International and National)	Full Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> apply
Needs Assessment for Capacity Development	\$0.1 mil.	1	Individual consultant (International)	-	ADB's <i>Guidelines on the Use of Consultants</i> apply
Capacity Development consultants	\$5 mil.	Several	QCBS (International/National)	Full Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> apply
External audit for FY 2011 (Capacity Development)	\$0.15 mil.	1	CQS (International/National)	Biodata Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> apply
External audit for FY 2012-2015 (Capacity Development)	\$0.85 mil.	Several	CQS for ADB-funded contracts for FY 2012 and 2015, Government procured for World Bank-funded contract for FY 2013-2014	Biodata Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> and World Bank's guidelines apply

B. As of July 2013

1. Process Thresholds, Review and 18-Month Procurement Plan

a. Project Procurement Thresholds

74. 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
International Competitive Bidding (ICB) for Works	Above \$1 million
International Competitive Bidding for Goods	Above \$500,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000

b. ADB Prior or Post Review

75. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
Shopping for Works	Prior	
Shopping for Goods	Prior	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Consultants' Qualification Selection (CQS)	Prior	
Least-Cost Selection (LCS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

c. Goods and Works Contracts Estimated to Cost More Than \$500,000

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

General Description	Contract Value	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
Equipment/System (Capacity Development)	\$3 mil.	ICB/Shopping		Q1 2014	Precise scope to be developed by needs assessment

d. Consulting Services Contracts Estimated to Cost More Than \$100,000

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

General Description	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Capacity Development consultants	\$5 million	QCBS with quality:cost ratio 80:20	Q3 2013	Both international and national	Precise TOR to be developed by needs assessment consultant
External audit for FY 2013-2014	\$0.40 million	Government procured and financed by World Bank	Q4 2013	Both international and national	Government procured and financed by World Bank

2. Indicative List of Packages Required Under the Project

5. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project. Contracts financed by the Borrower and others should also be indicated, with an appropriate notation in the comments section.

General Description	Actual/ Estimated Value (cumulative)	Actual/ Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable/Technical Proposal	Comments
EPC Contract	\$861.78 million equiv.	1	ICB (Two-Stage Bidding)	No	Contract signed March 2013
Community service facility	\$1.5 million	1	Government financed and procured	-	Entirely Financed by Uzbekenergo; contract signed June 2012
Equipment/System Capacity Development	\$3 million	Several	ICB/Shopping	-	ADB <i>Procurement Guidelines</i> apply
Project Implementation and Supervision Consultant	\$8.63 million	1	QCBS (International and National)	Full Technical Proposal	Contract signed December 2011
Needs assessment for Capacity Development	\$0.1 million	1	Individual consultant (International)	-	ADB's <i>Guidelines on the Use of Consultants</i> apply
Capacity Development consultants	\$5 million	Several	QCBS (International/National)	Full Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> apply
External audit for FY 2011 and FY 2012	\$0.35 million	1	CQS (International/National)	Biodata Technical Proposal	Contract signed October 2012 for audit of FY 2011. Contract amended to cover FY 2012 in June 2013.
External audit for FY 2013-2015	\$0.65 million	Several	World Bank-funded contract for FY 2013-2014. CQS for ADB-funded contract for FY 2015.		ADB and World Bank's guidelines apply

B. As of November 2013

3. Process Thresholds, Review and 18-Month Procurement Plan

a. Project Procurement Thresholds

1. 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
International Competitive Bidding (ICB) for Works	Above \$1 million
International Competitive Bidding for Goods	Above \$500,000
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000

b. ADB Prior or Post Review

2. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
Shopping for Works	Prior	
Shopping for Goods	Prior	
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Consultants' Qualification Selection (CQS)	Prior	
Least-Cost Selection (LCS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

c. Goods and Works Contracts Estimated to Cost More Than \$500,000

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

General Description	Contract Value	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
Equipment/System (Capacity Development)	\$3 mil.	ICB/Shopping		Q1 2014	Precise scope to be developed by needs assessment

d. Consulting Services Contracts Estimated to Cost More Than \$100,000

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

General Description	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Capacity Development consultants	\$5 million	QCBS with quality:cost ratio 80:20	Q4 2013	Both international and national	Precise TOR to be developed by needs assessment consultant
External audit for FY 2013-2014	\$0.40 million	Government procured and financed by World Bank	Q4 2013	Both international and national	Government procured and financed by World Bank

4. Indicative List of Packages Required Under the Project

5. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project. Contracts financed by the Borrower and others should also be indicated, with an appropriate notation in the comments section.

General Description	Actual/ Estimated Value (cumulative)	Actual/ Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable/Technical Proposal	Comments
EPC Contract	\$861.78 million equiv.	1	ICB (Two-Stage Bidding)	No	Contract signed March 2013
Community service facility	\$1.5 million	1	Government financed and procured	-	Entirely Financed by Uzbekenergo; contract signed June 2012
Equipment/System Capacity Development	\$3 million	Several	ICB/Shopping	-	ADB <i>Procurement Guidelines</i> apply
Project Implementation and Supervision Consultant	\$8.63 million	1	QCBS (International and National)	Full Technical Proposal	Contract signed December 2011
Needs assessment for Capacity Development	\$0.1 million	1	Individual consultant (International)	-	ADB's <i>Guidelines on the Use of Consultants</i> apply
Capacity Development consultants	\$5 million	Several	QCBS (International/National)	Full Technical Proposal	ADB's <i>Guidelines on the Use of Consultants</i> apply
External audit for FY 2011 and FY 2012	\$0.4 million	1	CQS (International/National)	Biodata Technical Proposal	Contract signed October 2012 for audit of FY 2011. Contract amended to cover FY 2012 in June 2013.
External audit for FY 2013-2015	\$0.6 million	Several	World Bank-funded contract for FY 2013-2014. CQS for ADB-funded contract for FY 2015.		ADB and World Bank's guidelines apply

CHANGES TO COSTS AND FINANCING

A. After Revising Financing Percentages for the EPC Contract

1. Cost Estimates by Expenditure Category

		(\$ million)	
Item		Total Cost	% of Total Base Cost
A. Investment Costs			
1	EPC Contract(incl. social/environmental mitigation)	825.87	64.8%
2	Peripheral infrastructure & other costs	8.00	0.6%
3	PMU remuneration	2.00	0.2%
4	Social Infrastructure	1.50	0.1%
5	Consultants	17.96	1.4%
5a	Implementing Consulting Services	9.00	0.7%
	Capacity Development (Equipment/Consulting	8.96	0.7%
5b	Services)		
6	Taxes and Duties	230.00	18.1%
	Subtotal (A)	1085.33	85.2%
B. Contingencies			
1	Physical	84.42	6.6%
2	Price	61.14	4.8%
	Subtotal (B)	145.56	11.4%
C. Financing Charges During Implementation			
1	Interest During Implementation	37.74	3.0%
2	Commitment Charges	5.20	0.4%
	Subtotal (C)	42.94	3.4%
D. Total Project Cost (A+B+C)		1273.83	100.0%

2. Allocation of Loan Proceeds

a. Loan 2629 (OCR)

Category		Allocated (\$)	Financing	
No.	Item	Original	Original	Revised
1	Turnkey Contract	331,000,000	34 percent of total expenditure claimed*	38 percent of total expenditure claimed*
2	Consulting Services	9,000,000	100 percent of total expenditure claimed*	
	Total	340,000,000		

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

b. Loan 8244 (JICA)

Category		Allocated (¥)	Financing	
		Original	Original	Revised
(A)	Equipment & Civil Works	23,309,000,000	29 percent of total expenditure claimed	34 percent of total expenditure claimed
(B)	Contingencies**	4,114,000,000		
	Total	27,423,000,000		

** JICA will reallocate the proceeds in (B) Contingencies to (A) when this becomes necessary.

XI. Record of PAM Changes, Appendix 7

3. Expenditures by Financier

(\$ million)												Total Cost	
Item	ADB (OCR)		ADB (ADF)		JICA		UFRD		GoU		Uzbekenergo		
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount		% of Cost Category
A Investment Costs													
1 EPC Contract(incl. social/environmental mitigation)	313.83	38.0%	-	-	280.79	34.0%	231.24	28.0%	-	-	-	-	825.87
2 Peripheral infrastructure & other costs	-	-	-	-	-	-	-	-	-	-	8.00	100.0%	8.00
3 PMU remuneration	-	-	-	-	-	-	-	-	-	-	2.00	100.0%	2.00
4 Social Infrastructure	-	-	-	-	-	-	-	-	-	-	1.50	100.0%	1.50
5 Consultants	9.00	50.1%	8.96	49.9%	-	-	-	-	-	-	-	-	17.96
5a Implementing Consulting Services	9.00	100.0%	-	-	-	-	-	-	-	-	-	-	9.00
5b Capacity Development (Equipment/Consulting Servi	-	-	8.96	100.0%	-	-	-	-	-	-	-	-	8.96
6 Taxes and Duties	-	-	-	-	-	-	-	-	230.00	100.0%	-	-	230.00
Subtotal (A)	322.83	29.7%	8.96	0.8%	280.79	25.9%	231.24	21.3%	230.00	21.2%	11.50	1.1%	1,085.33
B Contingencies	17.17	11.8%	1.04	0.7%	13.03	9.0%	18.76	12.9%	-	-	95.56	65.7%	145.56
C Financing Charges During Implementation	-	-	-	-	-	-	-	-	-	-	42.94	100.0%	42.94
D Total Project Cost (A+B+C)	340.00	26.7%	10.00	0.8%	293.82	23.1%	250.00	19.6%	230.00	18.1%	150.00	11.8%	1,273.82
% Total Project Cost		27%		1%		23%		20%		18%		12%	1.00

ADB=Asian Development Bank, OCR=Ordinary capital reserve, ADF=Asian Development Fund, JICA=Japan International Cooperation Agency, UFRD=Uzbekistan Fund for Reconstruction and Development, GoU=Government of Uzbekistan, EPC=engineering, procurement, construction

Notes:

1. The original financing percentages for the entire project do not change, including the counterpart funding by the Government (i.e. UFRD, GoU and Uzbekenergo).
2. USD equivalent of JICA funding is based on exchange rate of 93.3 JPY/USD.
3. Highlighted changes are to (i) exemplify Uzbekenergo's contribution for the investment by adding cost items for peripheral infrastructure and other costs, and PMU remuneration; and (ii) reflect changes to the disbursement ratio.

4. Expenditure Accounts by Outputs/Components

(\$ million)					
Item	Total Cost	Clean and efficient technology Component 1		Uzbekenergo's capacity development Component 2	
		Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs^a					
1 EPC Contract/Equipment/Civil Works etc.	893.05	893.05	70.4%	-	0.0%
2 Social Infrastructure	1.50	1.50	0.1%	-	0.0%
3 Implementing Consulting Services	8.61	8.61	0.7%	-	0.0%
4 Capacity Development (Equipment/Consulting Services)	8.96	-	0.0%	8.96	72.6%
5 Taxes and Duties	230.00	227.94	18.0%	2.06	16.7%
Subtotal (A)	1140.62	1129.60	89.1%	11.02	89.2%
B. Contingencies					
1 Physical ^b	56.05	55.50	4.4%	0.55	4.5%
2 Price ^c	40.39	39.89	3.1%	0.50	4.0%
Subtotal (B)	96.44	95.39	0.0%	1.05	0.0%
C. Financing Charges During Implementation^d					
1 Interest During Implementation	37.74	37.46	3.0%	0.28	2.3%
2 Commitment Charges	5.20	5.20	0.4%	-	0.0%
Subtotal (C)	42.94	42.66	3.4%	0.28	2.3%
D. Total Project Cost (A+B+C)	1280.00	1267.65	100.0%	12.35	100.0%

EPC = engineering, procurement, and construction.

a In mid-2009 prices.

b Computed at 5% of total material cost.

c Computed at 0.8% of costs for foreign currency and 12.6% of costs for local currency.

d Includes interest and commitment charges. Interest during construction has been computed as follows: ADB's ordinary capital reserve and Fund for Reconstruction and Development of the Republic of Uzbekistan: at the five-year forward London interbank-offered rate plus a spread of 0.20% minus rebate (0.28%); ADB's Asian Development Fund: 1.0% plus a spread of 0.2%; and Japan International Cooperation Agency:

Source: Asian Development Bank estimates.

B. After Reflecting Actual Contract Amounts**1. Cost Estimates by Expenditure Category**

		(\$ million)	
		Total	% of
Item		Cost	Total Base Cost
A. Investment Costs			
1	EPC contract(incl. social/environmental mitigation)	861.78	76.7%
2	Secondary (external) infrastructure & preparatory works	9.52	0.8%
3	PMU remuneration	2.00	0.2%
4	Social Infrastructure	2.21	0.2%
5	Consulting services	17.96	1.6%
a	Implementing consulting services	9.00	0.8%
b	Capacity development	8.96	0.8%
1	Capacity development consulting services	4.96	0.4%
2	Equipment	3.00	0.3%
3	External audit	1.00	0.1%
6	Taxes and duties	230.00	20.5%
	Subtotal (A)	1,123.47	100.0%
B. Contingencies			
1	Physical	81.15	7.2%
2	Price	23.00	2.0%
	Subtotal (B)	104.15	9.3%
C. Financing Charges During Implementation			
1	Interest during implementation	37.74	3.4%
2	Commitment charges	5.20	0.5%
	Subtotal (C)	42.94	3.8%
D. Total Project Cost (A+B+C)		1,270.56	113.1%

2. Expenditures by Financier

(\$ million)														
Item	ADB (OCR)		ADB (ADF)		JICA		UFRD		GoU		Uzbekenergo		Total Cost	
		% of Cost		% of Cost		% of Cost		% of Cost		% of Cost		% of Cost		
	Amount	Category	Amount	Category	Amount	Category	Amount	Category	Amount	Category	Amount	Category		
A. Investment Costs														
1	EPC contract(incl. social/environmental mitigation)	327.71	38.0%	-	-	293.21	34.0%	240.86	28.0%	-	-	-	-	861.78
2	Secondary (external) infrastructure & preparatory works	-	-	-	-	-	-	-	-	-	-	9.52	100.0%	9.52
3	PMU remuneration	-	-	-	-	-	-	-	-	-	-	2.00	100.0%	2.00
4	Social Infrastructure	-	-	-	-	-	-	-	-	-	-	2.21	100.0%	2.21
5	Consulting services	9.00	50.1%	8.96	49.9%	-	-	-	-	-	-	-	-	17.96
a	Implementing consulting services	9.00	100.0%	-	-	-	-	-	-	-	-	-	-	9.00
b	Capacity development	-	-	8.96	100.0%	-	-	-	-	-	-	-	-	8.96
1	Capacity development consulting services	-	-	4.96	100.0%	-	-	-	-	-	-	-	-	4.96
2	Equipment	-	-	3.00	100.0%	-	-	-	-	-	-	-	-	3.00
3	External audit	-	-	1.00	100.0%	-	-	-	-	-	-	-	-	1.00
6	Taxes and duties	-	-	-	-	-	-	-	-	230.00	100.0%	-	-	230.00
	Subtotal (A)	336.71	30.0%	8.96	0.8%	293.21	26.1%	240.86	21.4%	230.00	20.5%	13.73	1.2%	1,123.47
B. Contingencies														
1	Physical	3.29	4.1%	1.04	1.3%	6.49	8.0%	-	-	-	-	93.33	89.6%	104.15
2	Price	-	-	-	-	-	-	-	-	-	-	23.00	100.0%	23.00
	Subtotal (B)	3.29	3.2%	1.04	1.0%	6.49	6.2%	-	-	-	-	93.33	89.6%	104.15
C. Financing Charges During Implementation														
1	Interest during implementation	-	-	-	-	-	-	-	-	-	-	42.94	100.0%	42.94
2	Commitment charges	-	-	-	-	-	-	-	-	-	-	5.20	100.0%	5.20
	Subtotal (C)	-	-	-	-	-	-	-	-	-	-	42.94	100.0%	42.94
D. Total Project Cost (A+B+C)		340.00	26.8%	10.00	0.8%	299.71	23.6%	240.86	19.0%	230.00	18.1%	150.00	11.8%	1,270.56
% Total Project Cost			27%		1%		24%		19%		18%		12%	100%

3. Expenditure Accounts by Outputs/Components

		(\$ million)				
		Clean and efficient technology Component 1			Uzbekenergo's capacity development Component 2	
Item		Total Cost	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs						
1	EPC contract(incl. social/environmental mitigation)	861.78	861.78	68.4%	-	0.0%
2	Secondary (external) infrastructure & preparatory works	9.52	9.52	0.8%	-	
3	PMU remuneration	2.00	2.00	0.2%	-	
4	Social Infrastructure	2.21	2.21	0.2%	-	0.0%
5	Consulting services	17.96	9.00	0.7%	8.96	89.6%
a	Implementing consulting services	9.00	9.00	0.7%		0.0%
b	Capacity development	8.96	-	0.0%	8.96	89.6%
1	Capacity development consulting services	4.96	-	0.0%	4.96	
2	Equipment	3.00	-	0.0%	3.00	
3	External audit	1.00	-	0.0%	1.00	
6	Taxes and duties	230.00	230.00	18.2%	-	0.0%
	Subtotal (A)	1,123.47	1,114.51	88.4%	8.96	89.6%
B. Contingencies						
			-		-	
1	Physical	81.15	80.60	6.4%	0.55	5.5%
2	Price	23.00	22.79	1.8%	0.21	2.1%
	Subtotal (B)	104.15	103.39	0.0%	0.76	0.0%
C. Financing Charges During Implementation						
1	Interest during implementation	37.74	37.46	3.0%	0.28	2.8%
2	Commitment charges	5.20	5.20	0.4%	-	0.0%
	Subtotal (C)	42.94	42.66	3.4%	0.28	2.8%
D. Total Project Cost (A+B+C)		1,270.56	1,260.56	100.0%	10.00	100.0%