Completion Report

Project Number: 45120-003
Loan Numbers: 3058, 3059
July 2019

Uzbekistan: Samarkand Solar Power Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit – sum (SUM)

		At Appraisal	At Project Completion
		2 August 2013	30 August 2017
SUM1.00	=	$0.0004658313	$0.0002375099
$1.00	=	SUM2,146.70	SUM4,210.35

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
DBO	–	design–build–operate
FY	–	fiscal year
GW	–	gigawatt
INDC	–	intended nationally determined contribution
LARP	–	land acquisition and resettlement plan
MFERIT	–	Ministry for Foreign Economic Relations, Investments and Trade
MOF	–	Ministry of Finance
MW	–	megawatt
O&M	–	operation and maintenance
PIC	–	project implementation consultant
PPP	–	public–private partnership
PV	–	photovoltaic
SCI	–	State Committee of the Republic of Uzbekistan for Investments
SDR	–	special drawing right
TA	–	technical assistance
UNFCCC	–	United Nations Framework Convention on Climate Change

NOTES

(i) The fiscal year (FY) of the Government of Uzbekistan ends on 31 December. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2018 ends on 31 December 2018.

(ii) In this report, "$" refers to United States dollars.

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CONTENTS

BASIC DATA

A. Loan Identification

1.	Country	Uzbekistan
2.	Loan number and financing source	3058-UZB (SF) and 3059-UZB (SF) – Asian Development Fund
3.	Project title	Samarkand Solar Power Project
4.	Borrower	Republic of Uzbekistan
5.	Executing agency	State Joint Stock Company Uzbekenergo
6.	Amount of loan	3058-UZB (SF): SDR65,822,000 ($101,100,000 equivalent) 3059-UZB (SF): SDR5,794,000 ($8,900,000 equivalent)
7.	Financing modality	Project loan

B. Loan Data for Loans 3058-UZB (SF) and 3059-UZB (SF)

1.	Appraisal	10 to 21 June 2013
2.	Loan negotiations	7 to 8 October 2013
3.	Date of Board approval	20 November 2013
4.	Date of loan agreement	21 November 2013
5.	Date of loan effectiveness	
	– In loan agreement	20 January 2014
	– Actual	4 February 2014
	– Number of extensions	1
6.	Project completion date	
	– Appraisal	31 March 2019
	– Actual	Not applicable (project canceled)
7.	Loan closing date	30 September 2019
8.	Financial closing date	30 August 2017
9.	Terms of loan	
	– Interest rate	2% per annum
	– Maturity (number of years)	20 years
	– Grace period	5 years
10.	Terms of relending (if any)	
	– Interest rate	2.2% to 2.5% per annum
	– Maturity	25 years
	– Grace period	5 years
	– Second-step borrower	State Joint Stock Company Uzbekenergo

11. Disbursements

a. Dates

Initial Disbursement (Loan 3059-UZB [SF])	Final Disbursement (Loan 3059-UZB [SF])	Time Interval
24 August 2015	7 October 2015	1.45 months
Effective Date	**Actual Closing Date**	**Time Interval**
4 February 2014	30 August 2017	42.84 months

Note: There were no disbursements from Loan 3058-UZB (SF).

b. Amounts ('000)

Category	Original Allocation (1)	Increased during Implementation (2)	Canceled during Implementation (3)	Last Revised Allocation (4=1+2–3)	Amount Disbursed (5)	Undisbursed Balance (6 = 4–5)
Amounts in Special Drawing Rights						
Loan 3058-UZB (SF)						
01 Turnkey contract	58,595	0	0	0	0	58,595
02 Unallocated	7,227	0	0	0	0	7,227
Total	**65,822**	**0**	**0**	**0**	**0**	**65,822**
Loan 3059-UZB (SF)						
01 Consulting services	4,557	0	0	0	521	4,036
02 Unallocated	1,237	0	0	0	0	1,237
Total	**5,794**	**0**	**0**	**0**	**521**	**5,273**
Amounts in United States Dollar Equivalent						
Loan 3058-UZB (SF)						
01 Turnkey contract	90,000	0	0	0	0	90,000
02 Unallocated	11,100	0	0	0	0	11,100
Total	**101,100**	**0**	**0**	**0**	**0**	**101,100**
Loan 3059-UZB (SF)						
01 Consulting services	7,000	0	0	0	729	6,272
02 Unallocated	1,900	0	0	0	0	1,900
Total	**8,900**	**0**	**0**	**0**	**729**	**8,172**

C. Project Data

1. Financing plan ($ million)

Cost	Appraisal Estimate	Actual
Implementation cost		
Borrower financed	44.000	0.000
ADB financed		
Loan 3058-UZB (SF)	101.100	0.000
Loan 3059-UZB (SF)	8.900	0.729
Other external financing		
UFRD	130.000	0.000
Uzbekenergo	17.800	2.025
Subtotal implementation cost (a)	**301.800**	**2.754**
Interest during construction costs		
Borrower financed	0.000	0.000
ADB financed	0.000	0.000
Other external financing: Uzbekenergo	8.200	0.000
Subtotal interest during construction cost (b)	**8.200**	**0.000**
Total (a + b)	**310.000**	**2.754**

ADB = Asian Development Bank, UFRD = Uzbekistan Fund for Reconstruction and Development.

2. Cost breakdown by project component ($ million)

Component	Appraisal Estimate	Actual
A. Investment Costs		
1. Solar photovoltaic turnkey (DBO) contract	200.000	0.000
2. Transmission line procurement and installation	14.800	1.930
3. Supporting infrastructure	1.700	0.000
4. Land acquisition and resettlement	0.300	0.000
5. Consulting services (project management and capacity development)	7.000	0.729
6. Taxes and duties	44.000	0.000
B. Recurrent costs: project management	1.000	0.095
C. Contingencies		
1. Physical	19.400	0.000
2. Price	13.600	0.000
D. Financing charges during implementation: IDC	8.200	0.000
Total	**310.000**	**2.754**

DBO = design–build–operate, IDC = interest during construction.

3. Project schedule

Item	Appraisal Estimate	Actual
Contract award for project management and capacity development consultants	October 2014	May 2015
Land acquisition and resettlement	September 2013	Not applicable[a]
Transmission Line		
Procurement	April 2015	90% completed as of
Installation	August 2015	June 2017
Supporting infrastructure[b]		
Perimeter fence	October 2015	October 2016
Water services	October 2015	July 2014
Telecommunications services	October 2015	Mobile services available[c]
Access road	October 2015	Road asphalting ongoing as of November 2016
Solar photovoltaic turnkey (DBO) contract		
Contract award	November 2014	December 2016
Detailed engineering design	March 2015	
Civil works	May 2015	
Testing and commissioning	March 2016	
3-year operation and maintenance	March 2019	
Capacity development	March 2017	

DBO = design–build–operate.

[a] According to the updated land acquisition and resettlement plan in May 2015, the project site will be on reserved land, and therefore will not have land acquisition and resettlement.

[b] Asian Development Bank. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Republic of Uzbekistan for the Samarkand Solar Power Project*. Loan Agreement (accessible from the list of linked documents in Appendix 2). Manila (schedule 5, para. 5).

[c] Telephone and internet services were to be linked to State Joint Stock Company Uzbekenergo's line during construction.

4. Project performance report ratings

Implementation Period	Single Project Rating
From Q1 to Q4 2014	On track
From Q1 to Q2 2015	Potential problem
From Q3 2015 to Q4 2016	On track
From Q1 to Q3 2017	Potential problem

Q = quarter.

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members					
				Technical	Project management	Safeguards	Economist	Gender	Legal
Reconnaissance	5–8 February 2013	2	8	1	1				
Fact-finding	10–21 June 2013	8	56	2	2	1	1	1	1
Inception	4–7 February 2014	5	16	2	3				
Review 1	20–24 October 2014	5	25	1	3	1			
Review 2	1–6 July 2015	1	5	1					
Midterm review	11–13 November 2015	2	6	1	2				
Special Project Administration 1	20–22 January 2016	4	13	1	2		1		
Special Project Administration 2	28–30 March 2016	2	6	1	1				
Special Project Administration 3	22–25 June 2016	3	6	2	1				
Special Project Administration 4	10–12 August 2016	3	9	1	1		1		
Review 3	15–29 November 2016	3	15	1	2				
Review 4	21–26 April 2017	1	5	1					
Special Project Administration 5	14–20 June 2017	3	12	2	2				

I. PROJECT DESCRIPTION

1. The project aimed to increase renewable energy generation and reduce greenhouse gas emissions in Uzbekistan. The expected project impact was improved sustainability of the energy supply in Uzbekistan, and the expected outcome was increased renewable energy generation in Uzbekistan. The project envisaged three main outputs: (i) a 100-megawatt (MW) solar photovoltaic (PV) power plant,[1] including transmission and support facilities, constructed; (ii) institutional capacity of the executing agency, State Joint Stock Company Uzbekenergo,[2] developed; and (iii) institutional capacity of solar energy stakeholders developed.[3]

2. Uzbekistan has been one of the most energy- and carbon-intensive countries in the world, both over six times the global average in 2011.[4] Hence, the government was calling for drastic increases in energy efficiency and renewable energy. While Uzbekistan is almost 100% electrified, its aging and overloaded power system causes a supply–demand gap, resulting in prolonged and frequent outages, especially in rural areas. This affects quality of life, economic activities, and the delivery of social services. Energy supply is further threatened given the country's depleting fossil fuel reserves. The reserve-to-production ratio is 10–12 years for oil, 28–30 years for natural gas, and 40–50 years for coal. Continued reliance on gas accelerates its depletion and hampers diversification of the energy mix. It also translates to lost export revenues, estimated at $900 million for 2012 alone.[5] Despite the huge potential, renewable energy supplies less than 11% of demand, and only from hydropower resources.

3. With Uzbekistan's high solar irradiance and abundant land for solar development, Asian Development Bank (ADB) and the government deemed solar energy as the most suitable renewable energy resource to bridge the supply–demand gap and diversify the mix, as well as reduce greenhouse gas emissions. Under the Solar Energy Development policy and advisory technical assistance (TA) project, funded by the ADB and approved in December 2011, feasibility studies were conducted in six provinces, which are geographically spread across the country and prioritized according to solar resources and the gap between energy supply and demand.[6] Of the six provinces, Samarkand was prioritized because of its historical significance, proximity to the

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[1] To achieve 100 MW alternating current at the power plant boundary, the feasibility study estimated that a nominal peak direct current installed capacity of 115 MW would be needed, subject to detailed design.

[2] In March 2019, Uzbekenergo was split into three joint-stock companies. For the Samarkand Solar Power Project, Uzbekenergo's legal successor is Joint Stock Company National Electric Networks of Uzbekistan. This project completion report still refers to Uzbekenergo as the project's executing agency. Government of Uzbekistan. 2019. *On the Strategy of Further Development and Reform of the Electric Power Industry of the Republic of Uzbekistan.* Resolution of the President of the Republic of Uzbekistan, 27 March, No. PP-4249. Tashkent.

[3] Asian Development Bank (ADB). 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Republic of Uzbekistan for the Samarkand Solar Power Project*. Manila.

[4] International Energy Agency. 2011. *Key World Energy Statistics 2011*. Paris. Energy intensity refers to the total energy supply, expressed in tons of oil equivalent per gross domestic product. Uzbekistan's energy intensity was 1.97, while the world average was 0.31 in 2011. Carbon intensity is a measure of how much greenhouse gas an economy emits for every United States dollar of gross domestic product produced, expressed in kilograms of carbon dioxide equivalent per gross domestic product. The world average was only 0.73, while Uzbekistan's was 4.53.

[5] In 2012, Uzbekenergo's average purchase price was $1.46 per million British thermal units, against the average international wholesale price of $3.24 per million British thermal units.

[6] ADB. 2011. *Technical Assistance to the Republic of Uzbekistan for Solar Energy Development*. Manila. The following six feasibility studies were approved in 2015 for: 100 MW PV projects in (i) Samarkand, Samarkand; (ii) Sherabad, Surkhandarya; (iii) Namangan, Fergana Valley; and (iv) Guzar, Kashkadarya; (v) a 130 MW concentrating solar power plant in Karmana, Navoi; and (vi) a 10 MW concentrating solar power demonstration plant in Kibray, Tashkent. The TA was rated *highly successful*, largely because it was *highly relevant* and *highly effective* in pushing solar power policy in Uzbekistan and confirming project readiness, including for the Samarkand Solar Power Project. ADB. 2016. *Technical Assistance Completion Report: Solar Energy Development in Uzbekistan*. Manila.

capital Tashkent, and tourism potential. Using rigorous selection criteria, a site was chosen for the project to quickly meet the energy demand of Samarkand, some areas of which have grid electricity for only 1–2 hours per day in winter and 16–18 hours per day in summer, on average. The available land, proximity to a substation that can connect the PV power plant to the national grid, PV technology's compatibility with local conditions, and other factors were considered.

II. DESIGN AND IMPLEMENTATION

4. After thorough due diligence to develop solid project design and implementation arrangements (paras. 10 to 19), the project was not implemented. The loans were approved and signed in November 2013, declared effective in February 2014, but were canceled effective 30 August 2017, with only two disbursements for the project implementation consultant (PIC) under Loan 3059-UZB (SF) (para. 23) and no disbursements under Loan 3058-UZB (SF).

5. The cancellation of the loans followed a protracted procurement for the design–build–operate (DBO) contractor for the PV power plant that took over 2 years from the issuance of the invitation for bids in November 2014 to contract signing in December 2016. Procurement was delayed mainly to allow for additional activities necessitated by the government to ascertain the integrity of the bidding and selection processes, and also because ADB and the government were using the International Federation of Consulting Engineers' Conditions of Contract for Design, Build and Operate Projects[7] for the first time (paras. 26–29). After the contract was finally signed but before it was supposed to have been registered with the Ministry for Foreign Economic Relations, Investments and Trade (MFERIT) for it to become effective under the laws of Uzbekistan, the new government dissolved the MFERIT and created the new State Committee of the Republic of Uzbekistan for Investments (SCI) in March 2017.[8] The SCI ordered another review of the feasibility study that had been approved by the government in June 2013.

6. The Ministry of Finance (MOF) then requested an independent expert to review the DBO contract to verify its cost-competitiveness and confirm that the technology offered was the latest technology. A special project administration mission was fielded in June 2017 at the MOF's further request following the findings of the review. The independent expert joined the mission, explained the findings to the government, and confirmed that (i) the DBO contract was still cost-competitive despite the delays, (ii) the technical and technological specifications were the latest proven technology, and (iii) there was no need to amend the specifications. Despite the support and clarifications provided by the mission and the independent expert, the contract was still not registered by the SCI, and no clear explanation was given for delaying the registration.

7. On 30 August 2017, ADB received the official request from the MOF and the ADB Governor for the Republic of Uzbekistan to cancel the loan balances. The government explained that they (i) lacked the knowledge and experience in operating solar PV power plants, and (ii) decided to consider implementing solar power projects as pilot projects with lower capacity (30–50 MW). On the first point, Uzbekenergo's lack of knowledge and experience in operation and maintenance (O&M) of PV power plants was identified during project design and preparation, and ADB and the government agreed to address this by having the contractor provide O&M

[7] International Federation of Consulting Engineers. 2008. *Conditions of Contract for Design, Build and Operate Projects.* Geneva.

[8] The government went through massive reorganization in early 2017; all ongoing and pipeline projects funded by international financing institutions were suspended, and some were canceled immediately after. Several key positions in the Cabinet of Ministers were changed, and a new National Agency for Project Management was created to manage all projects.

services for 3 years after commissioning through a DBO contract (para. 27). Moreover, a capacity needs assessment and a capacity development plan were made under the project preparatory technical assistance,[9] which the PIC was tasked to update and implement so that Uzbekenergo could be well equipped to take over the plant O&M after 3 years. Some capacity building was also provided to Uzbekenergo while procuring the DBO contract. On the second point, the choice of plant configuration and size for the project was an informed decision made by the government. The feasibility study offered options for 25 MW, 50 MW, 75 MW, and 100 MW PV power plants using different types of solar panels (polycrystalline, monocrystalline, and thin-film) and tracking systems (fixed-tilt, single-axis, and double-axis tracking), with various cost implications and requirements for grid strengthening. Uzbekenergo chose to construct a 100 MW crystalline fixed-tilt PV power plant after guidance from the TA and review and assistance from the country's design institutes (e.g., the International Solar Energy Institute, the Academy of Sciences of the Republic of Uzbekistan, and the Scientific Production Association on Solar Physics of the Academy of Sciences of the Republic of Uzbekistan). The government did not further explain to ADB its decision to pilot-test projects with lower capacity. Grid impact was also discussed in the feasibility study.

8. In September 2017, however, the MOF asked ADB's Uzbekistan Resident Mission to hold the loan cancellation while the government reconsidered the project. On 2 November 2017, the MOF verbally reconfirmed its request to cancel the loans with the resident mission. ADB then canceled the loans effective on 30 August 2017, which was the date when ADB received the MOF's official request for cancellation. On 14 February 2018, Uzbekenergo advised the PIC that its contract ending in March 2018 would not be extended.

9. Because of the procurement delays, the baseline contract award and disbursement projections were not met, and the project was rated *potential problem* in the first half of 2015. When the contract award and disbursement projections were revised after the midterm review mission in November 2015, the project became *on track* from July 2015 to December 2016. The project was then rated *potential problem* from January to August 2017 when the loans were canceled.

A. Project Design and Formulation

10. The project concept was developed under the Solar Energy Development TA project (footnote 6) and finalized during the reconnaissance mission in February 2013. Project preparation took about 10 months from approval of the concept paper and project preparatory TA (footnote 9) in May 2013 to loan effectiveness in February 2014.

11. The project was aligned with ADB's Strategy 2020, and its Energy Policy.[10] The project directly supported Uzbekistan's clean energy and energy security targets as prioritized under the country partnership strategy for Uzbekistan, 2012–2016, and included in the country operations business plan for Uzbekistan, 2012–2014.[11]

12. **Technical due diligence.** During the decade before the project feasibility was completed in 2013, solar power plants generating more than 60 gigawatts (GW) were constructed, and solar technology improved. Mature solar technology has become widely accepted in terms of

[9] ADB. 2013. *Technical Assistance to the Republic of Uzbekistan for the Samarkand Solar Power Project.* Manila.
[10] ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila; and ADB. 2009. *Energy Policy*. Manila.
[11] ADB. 2012. *Country Partnership Strategy: Uzbekistan, 2012–2016*. Manila; and ADB. 2012. *Country Operations Business Plan: Uzbekistan, 2012–2014*. Manila.

construction and O&M, and was thus deemed suitable and bankable for Uzbekistan, including Samarkand.

13. Among the various solar technologies and configurations assessed during the feasibility stage from 2011 to 2013 (para. 7), the government selected PV technology for the project, as it used proven technology based on crystalline or polycrystalline modules on a fixed structure, which was compatible with local conditions. PV power plants are also modular, and their size and shape can be easily modified, minimizing the need for preparatory works. This was considered favorable to the project, particularly as the site had water runoffs (para. 16). The PV power plant's flexible features could help reduce the effect of flooding and other ground-related issues during construction and operation.

14. To build Uzbekenergo's limited knowledge and experience in PV technology, ADB and the government decided to have the contractor undertake plant O&M under a DBO contract for 3 years after commissioning. The PIC was also expected to assist in enhancing Uzbekenergo's skills during the first year of operation under the project's capacity development component.

15. **Project site selection.** Based on 12-year solar irradiation data correlated with ground meteorological data to reduce uncertainty, Samarkand's global horizontal irradiance is higher than 1,650 kilowatt-hours per square meter, which is enough for PV power plants. The Samarkand PV power plant's gross output was estimated at 159 GW per hour per year, measured in the high-voltage output terminals of the main transformer under standard conditions. The plant, including its O&M, was designed to guarantee at least 25 years of operation, with a 0.5% per year degradation on energy output. This can supply the energy demand from Samarkand, which is 20 kilometers away, and bridge capacity shortages in the Samarkand–Bukhara industrial hub. The project site was also within 15 kilometers of a substation, which can connect the plant to the national grid.

16. **Safeguards due diligence.** The project was categorized B for environment. Samarkand's arid climate is conducive to PV power generation, with 80–100 days of rainfall per year. During construction, it was believed the rains might increase the water turbidity of a progress canal at the site because of washouts and landslides by water runoff. Hence, a drainage system was included in the project design, along with mitigation measures for other anticipated environmental impacts during construction (noise, dust, and air pollutant emission from construction equipment and earth moving). No significant environmental impacts during operation were envisaged.

17. The project was categorized B for land acquisition and resettlement, and C for indigenous peoples. Samarkand had around 4,000 hectares of available wasteland, 407.8 hectares of which were idle and could be permanently acquired for the PV power plant, access road, and transmission line. Only the temporary land acquisition of 2.76 hectares for constructing the transmission was anticipated to affect 17 households with 109 persons, for which a land acquisition and resettlement plan (LARP) was prepared.

18. **Other due diligence.** General intervention for poverty reduction and social development was envisaged through increased power supply, which would (i) boost local employment from plant construction and operation, and create new businesses; (ii) improve education with reduced power interruptions; and (iii) reduce intestinal infections and cold-related diseases caused by poor potable water and winter heating systems. The project also had some gender elements to improve women's living and working conditions.

19. The project was deemed *economically viable*. Uzbekenergo's financial management risk after mitigation was assessed *moderate*, and procurement risk *average*. Summary status of the anticipated risks and mitigating measures as of the two loan cancellations are in Table 1.

Table 1: Status of Anticipated Risks and Mitigating Measures as of August 2017

Risk	Mitigating Measure	Status
Procurement delays	Advance contracting will be adopted. Training on ADB procurement and consultant recruitment procedures has been carried out. Procurement assistance is provided under the project preparatory TA and is included in the PIC's terms of reference.	Procurement was delayed by several factors (main text, paras. 25 to 29). Advance contracting was not adopted due to prolonged feasibility study, but procurement assistance was provided through the TA and PIC.
Financial management and administrative risks	ADB direct payment procedures will be used and no imprest account will be established. An accounting system compliant with NAS will be established and maintained. The PMU will be supported by international consultants. Training on ADB procedures will be provided. Recruitment and training of staff for IFRS will be implemented by Uzbekenergo with the help of the international consultant.	Proposed disbursement arrangements were adopted, and an NAS-compliant accounting system established. However, APFS submissions were noncompliant following transition from NAS to IFRS (main text, para. 50).
Delay in contract registration	Continuous dialogue will be held between the executing agency and the MFERIT to ensure that (i) contract registration does not cause unnecessary procurement delays; and (ii) procurement complies with the ADB Procurement Guidelines (2013, as amended from time to time), and price verification is not applied.	MFERIT registered the PIC contract around 1 month after submission. For the DBO contract, registration was delayed and did not occur because of several factors (main text, paras. 5 and 6). However, prompt contract registration was included as a loan covenant (main text, footnote 23), and the MFERIT was abolished, including requirements for price verification (main text, footnote 27).
Compromised procurement integrity	Project preparatory TA consultants are involved in the procurement and will review the authenticity of proposals. ADB will conduct parallel reviews of eligibility documents and expressions of interest and proposals for the DBO and consulting services contracts.	Procurement integrity was not compromised. Mitigation measures were applied, in addition to post-qualification due diligence and verification of technology by a third-party expert (main text, paras. 28 and 29).

ADB = Asian Development Bank; APFS = audited project financial statement; DBO = design–build–operate; IFRS = International Financial Reporting Standards; MFERIT = Ministry for Foreign Economic Relations, Investments and Trade; NAS = national accounting standards; PIC = project implementation consultant; PMU = project management unit; TA = technical assistance.
Source: ADB.

B. Project Outputs

20. The project envisaged three main outputs: (i) a 100 MW solar PV power plant, including transmission and support facilities, constructed; (ii) institutional capacity of Uzbekenergo developed; and (iii) institutional capacity of solar energy stakeholders developed. The first output was not achieved because the contract did not become effective and the loans were canceled. For the second and third outputs, although the planned trainings and manuals were not completed by the PIC, some hands-on institutional capacity building was provided to Uzbekenergo and the solar energy stakeholders (e.g., the International Solar Energy Institute, the Academy of Sciences of the Republic of Uzbekistan, and the Scientific Production Association on Solar Physics of the Academy of Sciences of the Republic of Uzbekistan) by ADB and the project preparatory TA consultants while preparing the bidding document and evaluating the bids.

C. Project Costs and Financing

21. The total project cost of $310.0 million was financed by (i) ADB's Asian Development Fund (ADF) for $101.1 million equivalent to finance 45% of the DBO contract under Loan 3058 (ADF regular term), and $8.9 million equivalent for the PIC under Loan 3059 (ADF hard term);[12] (ii) the Uzbekistan Fund for Reconstruction and Development for $130.0 million to finance 55% of the DBO contract; (iii) Uzbekenergo for $26.0 million for the pre-implementation works for supporting infrastructure ($17.8 million) (para. 41) and interest during construction ($8.2 million); and (iv) the government for $44.0 million for taxes and duties. The project cost tables are in the Basic Data section.

22. The MOF, the Uzbekistan Fund for Reconstruction and Development, and Uzbekenergo decided not to tap nonsovereign or private sector financing during project appraisal. The government planned to consider nonsovereign financing for solar power projects from 2021 or by 2025. This was reflected in the solar energy development road map developed under the Solar Energy Development TA project (footnote 6) and approved by the government and the solar energy stakeholders.

23. Before Loans 3058-UZB (SF) and 3059-UZB (SF) were canceled in August 2017 at the government's request (paras. 7 and 8), there were two disbursements for the PIC contract under Loan 3059-UZB (SF) totaling $728,911 for the (i) advance payment of $659,891 (10% of the contract price), and (ii) claims for 2 months amounting to $69,020.

24. Despite the 2.5-year delay in procurement, the winning bid was still deemed competitive. The DBO contract was awarded at $147 million, which was 74% of the contract estimate of $200 million.

D. Consultant Recruitment and Procurement

25. **Consultant recruitment.** The PIC was recruited using the quality- and cost-based selection method with an 80:20 ratio. The process was straightforward. However, there were delays caused mainly by the lengthy internal government approvals at each stage of short-listing, finalizing the request for proposals, conducting the technical evaluation, and conducting the financial evaluation. It took 21–42 days more than the schedule for each stage and, overall, around 1.5 years from advertisement in February 2014 to mobilization in July 2015. The PIC contract was awarded at $6.6 million, which was 94% of the contract estimate of $7.0 million.

26. **Procurement.** Procuring the DBO contract for the PV power plant using a single-stage, two-envelope bidding procedure was challenging. It was the first time the International Federation of Consulting Engineers' Conditions of Contract for Design, Build and Operate Projects was used by ADB and the government. As ADB did not have a standard bidding document for DBO contracts, multiple reviews and iterations by ADB, preparatory TA consultants, and the government were necessary to integrate the features of (i) the International Federation of Consulting Engineers' Conditions of Contract for Design, Build and Operate Projects (footnote 7); and (ii) ADB's Standard Bidding Document for the Procurement of Plant—Design, Supply, and Installation (May 2014) to develop the bidding document for the project.

[12] In June 2013, a financing gap was identified after the feasibility study was completed and during the fact-finding mission. The government then requested to increase the proposed loan amount by $20 million. In August 2013, ADB Management endorsed financing of the requested $20 million by advancing (i) $11.1 million from the remaining 2014 ADF performance-based allocation for Uzbekistan (ADF regular term), and (ii) $8.9 million from the ADF hard-term facility. Both loans had the same payment terms and were covered by one loan agreement.

27. The DBO contract modality was essential for the PV power plant's size, single responsibility, and performance guarantees to support the implementation of a successful project. To build Uzbekenergo's skills in PV technology, the project included a capacity development component for O&M training through the PIC. The PIC was also engaged to assist Uzbekenergo in DBO contract administration.

28. Procurement took around 2.5 years from ADB's receipt of the draft bidding document in August 2014 to contract signing in December 2016. Additional activities were necessitated by the government to support the integrity of the bidding process and selection of the best contractor, which ADB gave no objection to on an exceptional basis, such as (i) a third-party review of the feasibility study before the bidding document was finalized; (ii) revision of the technical bid evaluation report, which contained missing detailed technical evaluation of two bidders that were added as responsive; and (iii) post-qualification due diligence of the bidders following the government's request for rebidding in January 2016, which was rejected by ADB due to insufficient grounds.[13]

29. Following communications between ADB and the government, including meetings led by ADB's director general of the Central and West Asia Department, and the first deputy minister and minister of finance, the government's tender committee accepted on 24 March 2016 ADB's proposal to conduct post-qualification to reconfirm the findings of the technical bid evaluation report, particularly the winning bidder's qualifications.[14] The post-qualification due diligence was undertaken from June to September 2016 by a third-party consultant, who was quickly recruited through the consultant qualification selection method under the project preparatory TA. The tender committee accepted the consultant's findings and recommended the contract award. The contract was signed in December 2016 but was not registered to become effective (para. 5).

30. The post-qualification exercise not only enabled all parties to validate the winning bidder's qualifications, but also reconfirmed that the proposed PV modules were technologically and financially competitive 2 years after the bidding document was prepared. As it requires considerable time and resources, post-qualification due diligence may be considered for future procurement on an exceptional basis, and only through a competent and credible third-party verifier with clear terms of reference.

31. Overall, consultant recruitment and procurement were conducted diligently, albeit with delays. Key milestone dates are in Appendix 1.

[13] After receiving ADB's "no objection" to the contract award on 10 November 2015, Uzbekenergo wrote to ADB on 18 January 2016 about the tender committee's decision to rebid on the following grounds: (i) mismatch between the bidding document's technical specifications and modern solar energy technology; and (ii) contradictions between the bidding document's English and Russian versions, resulting in misrepresentation of technical scores. On 26 January 2016, ADB recommended to continue the bidding, as there were no justifiable grounds for rejecting the bids, and to rebid under ADB's Procurement Guidelines (2015, as amended from time to time). The (i) bidding document technical specifications were based on the government-approved feasibility study (para. 5), as endorsed by multiple stakeholders, and corresponded with up-to-date technology; and (ii) discrepancies between the bidding document's English and Russian versions did not affect the technical evaluation, as the English version prevailed over the Russian version.

[14] The post-qualification due diligence aimed to verify the (i) bidders' technical and financial capacities to successfully undertake the DBO contract; (ii) compliance of proposed suppliers and their equipment with bid requirements, including stringent tests for PV module performance and compliance with international best practices; (iii) validity of provided references, including onsite verification of contracts completed; and (iv) suitability of the proposed solutions for site conditions at Samarkand.

32. **Consultant performance and contract administration.** ADB was not informed of any issues related to the PIC's performance. All of the PIC's progress reports were approved by Uzbekenergo. However, there were disputes between Uzbekenergo and the PIC on the eligibility of some claims totaling $294,584 for July 2015 to March 2018 when, in the absence of a termination notice, the PIC continued to work even after the loans were canceled until the contract end date of 9 March 2018.[15] From March 2018, the PIC began asking ADB to help resolve the dispute. Although ADB refrained from directly intervening, as it was not a party to the contract and the loans were canceled, it provided clarifications on the relevant contract conditions.

33. The prolonged dispute between Uzbekenergo and the PIC on claims highlights the importance of clearly specifying the required supporting documents in the contract and issuing the contract termination notice immediately after loan cancellation or when the borrower decides to cancel. The PIC contract also did not allow interest on delayed payments, which could have encouraged quicker dispute resolution. The contract did provide for amicable settlement followed by arbitration.

E. Safeguards

34. The project complied with safeguards requirements. The project was approved as category B for environment and involuntary resettlement, and category C for indigenous peoples. The initial environmental examination (April 2013) was approved by the *Gosekoexpertisa* (State Ecological Expertise)[16] under the Samarkand Province Nature Protection Committee in August 2013 before the contract award, and environmental monitoring reports were submitted to ADB covering from July 2015 until June 2017, as covenanted.[17] The LARP (September 2013) was updated in May 2015, and also before the contract award, as covenanted.[18] The updated LARP confirmed that the project site will be on reserved land and will no longer require land acquisition and resettlement. The initial environmental examination, original and updated LARPs, and environmental monitoring reports are disclosed on the project website.[19]

35. The ADB Accountability Mechanism is still applicable to the project until 30 August 2019 or 2 years after loan closing.[20] The government was advised to ensure proper disclosure of this project completion report to the stakeholders, landowners, and affected households. If and when the project restarts, ADB may not be a part of the project.

[15] The government's auditor report in April 2018 observed that (i) some experts' timesheets were not approved, (ii) reports of business trip expenses and employment record books of local experts were not submitted, and (iii) copies of the passports as "assurance of actual working time of international and local experts in the home office (in the country of residence) were not provided to the full extent."

[16] This is the state department responsible for providing environmental expertise to the Samarkand Province Nature Protection Committee.

[17] ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Republic of Uzbekistan for the Samarkand Solar Power Project*. Loan Agreement (accessible from the list of linked documents in Appendix 2). Manila (schedule 4, para. 5; and schedule 5, para. 21).

[18] Footnote 17, schedule 4, para. 6.

[19] ADB. Uzbekistan: Samarkand Solar Power Project.

[20] ADB. 2012. *Accountability Mechanism Policy 2012*. Manila.

III. EVALUATION OF PERFORMANCE

A. Relevance

36. The project is rated *relevant* both at appraisal and after cancellation. It was fully aligned with the relevant country partnership strategy and was included in the country operations business plan for Uzbekistan (para. 11). The project was the first of several large-scale innovative solar power plants designed under the Solar Energy Development policy and advisory TA project (footnote 6) and programmed under the country's solar energy development road map, which was also developed under this same TA project and approved by the government. The project aimed to install at least 4 GW of solar power by 2030. The road map was officially submitted by the government to the United Nations Framework Convention on Climate Change (UNFCCC) in lieu of its intended nationally determined contribution (INDC) prior to its official full INDC submission in 2017 and as a nationally appropriate mitigation action.[21] The INDC mentions the planned 100 MW solar power plants.

37. The government cited its lack of experience in operating PV power projects and its decision to consider implementing solar power projects as pilot projects with lower capacity (30–50 MW) as reasons for canceling the project from sovereign financing in August 2017. However, the project preparatory consultant presented the option to construct a PV plant with lower capacity to the government during the feasibility stage (paras. 7 and 13), and provided a capacity development plan for Uzbekenergo, and some knowledge sharing on solar power plant O&M.

38. Contrary to its decision to not consider sovereign financing until 2021 (para. 22), the government decided to implement solar power projects using private sector financing.[22] The government signed a public–private partnership (PPP) deal with SkyPower Global in May 2018 to construct facilities for solar power generation in the Jizzakh, Kashkadarya, Navoi, Samarkand, Surkhandarya, and Tashkent regions with total capacity of 1,000 MW. Except for one, these are the same provinces with feasibility studies conducted under ADB's Solar Energy Development policy and advisory TA project and programmed in the road map (footnote 6). The International Finance Corporation has also been assisting the government and Uzbekenergo on structuring the PPP for these facilities, initially to attract private sector investment through auction for constructing and operating the 100 MW solar power plant in Navoi. The tender was launched in February 2019, and the evaluation report of the proposals for prequalification was approved in April 2019. The bidding document to select the general contractor were being drafted as of May 2019. The projects and agreements follow the ADB-assisted road map.

39. The project was also innovative. It was designed as the first large-scale solar power project in Uzbekistan and in Central Asia, with the most advanced technology. The DBO contract and post-qualification due diligence for the first-ranked bidder were also adopted for the first time in ADB.

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[21] UNFCCC. 2017. Uzbekistan Submits its Climate Action Plan. News release. 19 April; UNFCCC. 2017. *Intended Nationally Determined Contributions of the Republic of Uzbekistan*; and UNFCCC. 2015. Nationally Appropriate Mitigation Action for Recognition: Solar Energy Development in Uzbekistan.

[22] Government of Uzbekistan. 2018. O*n Additional Measures for the Implementation of Investment Projects in the Field of Renewable Energy Sources*. Resolution of the President of the Republic of Uzbekistan, 28 April, No. PP-3687. Tashkent.

B. Effectiveness

40. The project is rated *ineffective.* The expected outcome of increased renewable energy generation in Uzbekistan and the three outputs were not achieved, as the loans were canceled.

41. For the first output, the solar power plant, including transmission and support facilities, was not constructed since the DBO contract for the solar power plant did not commence. However, pre-implementation works were largely completed, including the access road, site leveling, perimeter fencing, water and electrical connection points, and the transmission line for connection to the high-voltage grid.

42. For the other two outputs, the institutional capacity development plan was completed but not approved by the government, and the planned training events were not undertaken. However, hands-on institutional capacity building was provided by ADB and the TA consultants to Uzbekenergo and the solar energy stakeholders, such as the International Solar Energy Institute, during the preparation of the bidding document and the evaluation of bids.

C. Efficiency

43. The project is rated *less than efficient* in terms of process efficiency in procurement and consultant recruitment. Procuring the DBO contract for the PV power plant took about 2.5 years from drafting the bidding document to contract signing, mainly to allow for additional activities deemed as necessary by the government to address internal concerns on the accuracy and impartiality of the bidding and selection processes (para. 28), and also because the DBO contract modality was used for the first time (paras. 26 and 27). However, considering such activities were new to both ADB and the government, the incremental time was still reasonable. ADB issued swift reviews and approvals, including by the Procurement Committee, to reduce delays. Likewise, consultant recruitment took 1.5 years mainly because of the lengthy internal government approvals, but there were no major issues. The PIC contract was registered by the MFERIT around 1 month from submission.

44. Even with the protracted procurement, both the DBO and PIC contracts were awarded below estimates. For the DBO contract, the winning bidder's technical specifications were verified by a third-party expert as the latest proven solar energy technology, and its price bid was still deemed competitive.

D. Sustainability

45. The project is rated *unlikely sustainable* as it was canceled at an early stage. The political risk of losing the government's buy-in to the project after changes to the government (para. 5) could not be mitigated and appears to be the key trigger for the loan cancellation. The other risks to project sustainability, such as economic, institutional, technical, financial, and safeguards risks, did not materialize during the early stages of the project and were not likely to materialize as the rigorous preparation helped mitigate these risks.

46. Despite the cancellation, however, and given the project design, due diligence, and pre-implementation works completed, the solar power plant could still be constructed and completed quickly either through government, private sector, or PPP financing. In fact, the government signed PPP agreements in May 2018 to construct solar energy facilities in six regions in Uzbekistan, including Samarkand (para. 38). Several of the projects identified in the agreements

are based on those developed with ADB assistance, and the first project in Samarkand will use the same site as this canceled project.

E. Performance of the Borrower and the Executing Agency

47. **Borrower.** The borrower's performance is rated *unsatisfactory* as its buy-in to the project was not sustained through the changes to the government. Such weakened ownership became particularly evident after the DBO contract was signed but not registered for it to become effective, which was also a breach of the loan covenant.[23] Through significant change in the government administration, the borrower then decided to cancel the project. However, the new government has been taking steps to resume the project with private sector financing.

48. **Executing agency.** Uzbekenergo's performance as executing agency is rated *less than satisfactory*. The project management unit promptly and diligently worked with the ADB project team in project preparation and initial implementation, particularly for consultant recruitment and procurement. Even with some changes in the project management unit's staffing, including the project director, there was strong commitment to achieve initial project deliverables with ADB.

49. However, Uzbekenergo did not comply with the loan covenants relating to (i) pre-commencement works, and (ii) audit. First, the access roads to the project site were not rehabilitated up to standard before the DBO contract award as per the loan agreement.[24] The access road works were largely completed before contract award in December 2016, and road asphalting was scheduled in February 2017. All other pre-implementation works for the supporting infrastructure were completed (para. 41).

50. Second, Uzbekenergo submitted the annual audited entity financial statements and audited project financial statements to ADB for fiscal year (FY) 2014 and FY2015, but not for FY2016 and FY2017 as covenanted in the project agreement.[25] Also, Uzbekenergo's first consolidated audited entity financial statements for FY2015 (as required by the loan agreement) was received only in February 2018, or 20 months after the due date in June 2016.[26] The delay was caused by Uzbekenergo's transition from using national accounting standards to International Financial Reporting Standards.

F. Performance of the Asian Development Bank

51. ADB's performance is rated *satisfactory*. From the concept stage, ADB was instrumental in pushing solar power policy and project development in Uzbekistan through the successful Solar Energy Development policy and advisory TA (footnote 6), and later project preparatory TA (footnote 9), which confirmed project readiness.

52. With strong coordination between ADB and Uzbekenergo, the loan was signed a day after loan approval, and loan effectiveness was declared after a 15-day interim extension of the deadline. Throughout the 3-year project implementation, ADB remained committed to the project

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[23] Footnote 17, schedule 5, para. 3.
[24] Footnote 17, schedule 5, para. 5 (b).
[25] ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Republic of Uzbekistan for the Samarkand Solar Power Project*. Project Agreement (accessible from the list of linked documents in Appendix 2). Manila (section 2.09). The disbursement data in the submitted audited project financial statements for FY2014 and FY2015 are the same data as reported in ADB's loan and grant financial information system.
[26] Footnote 17, schedule 5, para. 13.

despite challenges, such as changes in the government and procurement issues. Four review missions, a midterm review, and five special project administration missions were fielded. The project benefited from innovative solutions by the management of ADB's Central and West Asia department and the project team in both ADB headquarters and the resident mission.

G. Overall Assessment

53. Overall, the project's performance is evaluated as *less than successful* considering its relevance, effectiveness, efficiency, and sustainability. The project is rated *relevant* as it was fully aligned with the country strategies, and innovative being the first large-scale solar power project in Central Asia. However, the project is rated (i) *ineffective* as the expected outcome and outputs were not achieved at loan cancellation; (ii) *less than efficient* as while consultant recruitment and procurement were conducted diligently and the contracts were awarded below the estimates, there were delays; and (iii) *unlikely sustainable* as the project was cancelled at an early stage. The evaluation is summarized in Table 2.

Table 2: Overall Ratings

Criterion	Rating
Relevance	Relevant
Effectiveness	Ineffective
Efficiency	Less than efficient
Sustainability	Unlikely sustainable
Overall Assessment	**Less than successful**
Borrower	Unsatisfactory
Executing agency	Less than satisfactory
Performance of ADB	Satisfactory

ADB = Asian Development Bank.
Source: ADB.

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues and Lessons

54. **Weakened government ownership and private sector financing opportunities.** Despite ADB's continued engagement, the project was canceled, citing the government's lack of solar energy knowledge and experience, and its decision to consider smaller pilot projects. The government thereafter partnered with a private company to develop solar power plants of 50–100 MW in six regions, including Samarkand, with total capacity of 1,000 MW (para. 38). This is a major lesson indicating the increasing relevance of private sector financing for solar power plants. Future solar projects will need to consider the potential for private sector financing along with rigorous project preparation and due diligence.

55. **Procurement and contractual challenges and mitigating actions.** Piloting a solar power project and a DBO contract in Uzbekistan's energy sector was challenging. Significant staff and consultant resources were deployed to assist Uzbekenergo, particularly to finalize the bidding documents and respond to bidders' clarifications. In retrospect, the choice of the DBO contract modality was a key contributing factor for the project delays and, eventually, loan cancellation. However, DBO was assessed as the best option by ADB and the government to contribute to the success of the project (para. 27). The same bidding document has since been adopted for ADB's solar power projects in Afghanistan and Southeast Asia.

56. A lesson that helped reduce delays during the 2.5-year procurement period is the value of strong coordination among the government (particularly Uzbekenergo), ADB, and the consultants.

Through complex government procedures, the project would have faced further delays without such coordination. Process efficiency was also important, such as undertaking some activities in parallel like bidding document reviews.

57. Another procurement-related lesson is ensuring that integrity is not compromised during the delays, while being open to innovative solutions to select the best contractor. While allowing the government's special requests, such as a third-party review of the feasibility study, ADB continued adhering to sound procurement principles. For example, ADB rejected the government's request to rebid the DBO contract due to insufficient grounds, and instead offered to assist with post-qualification due diligence of the first-ranked bidder to respond to the government's concerns (para. 29). The government has since been demonstrating more initiative toward ensuring integrity and quality in procurement.[27]

58. Regarding contract administration, measures can be undertaken to help support smooth contract implementation and prevent disputes. For the claims dispute between Uzbekenergo and the PIC, more stringent contract provisions could have been applied, and a contract termination notice should have been issued earlier (para. 33).

B. Recommendations

59. **Explore nonsovereign opportunities.** Following the lessons from the short implementation of the Samarkand Solar Power Project, it is recommended to continue engaging in the renewable energy subsector in Uzbekistan and explore financing opportunities, particularly nonsovereign financing (para. 38). This also involves enhancing engagement between ADB's sovereign and private sector operations departments (the "One ADB" approach) to meet the government's and the subsector's changing and complex requirements.

60. **Strengthen procurement planning and capacity.** Given the delay resulting from using the DBO contract modality for the first time, any procurement planning for future projects should continue to carefully assess the modality to be adopted. In case ADB, Uzbekenergo, or other executing agencies are not familiar with the recommended modality or have limited procurement capacity, then consultants with ample experience should be engaged at an early stage.

61. Likewise, as it involves significant time and resources, undertaking post-qualification due diligence requires thorough consideration and planning. Post-qualification should continue to be considered for future procurement on an exceptional basis, and only with a well-qualified third-party verifier.

62. To improve contract administration, ADB and executing agencies will continue to benefit from trainings on contractual conditions and dispute resolution. ADB should also revisit the procedures for contract termination and continuation after loan cancellation.

63. **Maintain solid coordination and efficiency.** ADB should continue to closely coordinate with its clients, especially for new procurement and other project implementation arrangements; and adhere to the principles of integrity, efficiency, and economy while being open to innovative

[27] The MFERIT was abolished in 2017, including the government's requirements for price verification and contract registration. In January 2018, the government adopted Public Procurement Law 472, a unified institutional and operational framework for national public procurement, which is aligned with international practices and ADB's core procurement principles. Pursuant to Article 1 of the law, Uzbekenergo and other "strategically important enterprises," however, are exempted from this law, and it is premature to assess its real impact on current procurement practices in Uzbekistan.

solutions. The MOF, Uzbekenergo, and the solar energy stakeholders across various levels valued the efforts of the ADB headquarters and the Uzbekistan Resident Mission to respond to technical clarifications and resolve procurement issues to keep the project on track.

64. Overall, the major lesson from the project is the importance of continuously demonstrating ADB's commitment despite significant changes in the political and economic landscape, and procurement setbacks. Although the government eventually decided to cancel the project, ADB sealed its reputation as a key partner in Uzbekistan's energy sector. ADB's contributions to Uzbekistan's solar energy development continue to be used and cited within the country and in the international solar energy community.

KEY CONSULTANT RECRUITMENT AND PROCUREMENT MILESTONES

Table A.1: Recruitment of Project Implementation Consultant

Activity	ADB Norm Days	Planned			Actual			Deviation		Explanation and Action
		Days (A)	Date	Days (B)	Date	Days (C)	Cumulative Days (D)	Days (A–C)	Cumulative Days (B–D)	
SJSC Uzbekenergo (Uzbekenergo) requests EOIs			15 Feb 14		15 Feb 14					
Consultants submit EOIs	30	34	19 Mar 14	34	19 Mar 14	34	34	0	0	
CSC shortlists, and Uzbekenergo, and prepares shortlist and RFP (Submission 1)	10	29	30 Apr 14	63	8 May 14	50	84	21	21	Delayed approval of competent authorities
Uzbekenergo submits Submission 1 to ADB	1	1	1 May 14	64	20 Jun 14	43	127	42	63	Delayed approval of RFP by competent authorities
ADB reviews Submission 1	15	14	15 May 14	78	3 Jul 14	13	140	(1)	62	
ADB sends comments on Submission 1 to Uzbekenergo					4 Jul 14					
Uzbekenergo sends revised Submission 1 to ADB					23 Jul 14					Revised budget, RFP, NEC, and clarified a consultant's EOI
ADB sends approval of Submission 1 to Uzbekenergo	1	1	16 May 14	79	25 Jul 14	22	162	21	83	
Uzbekenergo issues RFP	7	7	23 May 14	86	29 Jul 14	4	166	(3)	80	
Consultants submit technical proposals	45	45	7 Jul 14	131	12 Sep 14	45	211	0	80	
CSC evaluates technical proposals, and Uzbekenergo prepares report (Submission 2)	21	20	27 Jul 14	151	6 Nov 14	55	266	35	115	Delayed government approval
Uzbekenergo submits Submission 2 to ADB	1	10	6 Aug 14	161	10 Dec 14	34	300	24	139	Submission had incomplete documents
ADB reviews and approves Submission 2	11	14	20 Aug 14	175	18 Dec 14	8	308	(6)	133	At ADB's request, Uzbekenergo reconfirmed issuance of summary and personnel evaluation sheets to short-listed firms, and revised the NEC.
ADB sends approval of Submission 2 to Uzbekenergo	1	1	21 Aug 14	176	29 Dec 14	11	319	10	143	
Uzbekenergo issues invitations to public opening of financial proposals	7	1	22 Aug 14	177	30 Dec 14	1	320	0	143	

Activity	ADB Norm Days	Planned			Actual			Deviation		Explanation and Action
		Days (A)	Date	Days (B)	Date	Days (C)	Cumulative Days (D)	Days (A–C)	Cumulative Days (B–D)	
Uzbekenergo facilitates public opening of financial proposals	7	6	28 Aug 14	183	8 Jan 15	9	329	3	146	
CSC evaluates financial proposals and undertakes overall ranking of technical and financial proposals, and Uzbekenergo prepares report (Submission 3)	14	7	4 Sep 14	190	22 Jan 15	14	343	7	153	Delayed CSC meeting, and report submission to ADB
Uzbekenergo submits Submission 3 to ADB	1	1	5 Sep 14	191	9 Feb 15	18	361	17	170	
ADB reviews Submission 3	7	14	19 Sep 14	205	19 Feb 15	10	371	(4)	166	
ADB sends approval of Submission 3 to Uzbekenergo	1	1	20 Sep 14	206	19 Feb 15	0	371	(1)	165	
Uzbekenergo issues invitation for contract negotiations	3	1	21 Sep 14	207	14 Apr 15	54	425	53	218	
Uzbekenergo and first-ranked consultant commence negotiations	14	8	29 Sep 14	215	27 Apr 15	13	438	5	223	
Uzbekenergo and first-ranked consultant complete negotiations	7	3	2 Oct 14	218	2 May 15	5	443	2	225	
Uzbekenergo submits draft negotiated contract (Submission 4) to ADB	7	1	3 Oct 14	219	22 May 15	20	463	19	244	Uzbekenergo submitted Submission 4 on 6 May 2015. ADB gave initial comments on 6 and 18 May, and received revised Submission 4 on 22 May. ADB gave conditional no objection on 26 May.
ADB reviews Submission 4	5	5	8 Oct 14	224	26 May 15	4	467	(1)	243	
ADB sends approval of Submission 4 to Uzbekenergo	1	1	9 Oct 14	225	26 May 15	0	467	(1)	242	
Uzbekenergo signs the contract and sends copy to ADB	14	11	20 Oct 14	236	25 Jun 15	30	497	19	261	Contract signed on 28 May 2015.
Uzbekenergo registers contract with MFERIT	0	10	30 Oct 14	246	6 Jul 15	11	508	1	262	
Uzbekenergo issues notice to proceed to consultant	7	1	31 Oct 14	247	10 Jul 15	4	512	(1)	265	
Consultant mobilizes	7	21	21 Nov 14	268	29 Jul 15	19	531	(2)	263	

ADB = Asian Development Bank; CSC = consultant selection committee; EOI = expression of interest; MFERIT = Ministry for Foreign Economic Relations, Investments and Trade; NEC = narrative evaluation criteria; RFP = request for proposal; SJSC = State Joint Stock Company.
Source: ADB.

Table A.2: Procurement of Design–Build–Operate Contract of Solar Photovoltaic Power Plant

Milestone	Date
Receipt of first draft bidding document	7 August 2014
ADB approval of bidding document	8 October 2014
Invitation for bids	16 October 2014
Availability of bidding document	23 October 2014
Pre-bid meeting and site visit	12 November 2014
Original deadline for bids	19 December 2014
Bidding document addendum 1	1 December 2014
Bidding document addendum 2	13 December 2014
Revised deadline for bids	22 January 2015
SJSC Uzbekenergo's (Uzbekenergo) submission of technical BER to ADB	12 May 2015
Detailed technical evaluation (Appendix 6 of technical BER)	13 July 2015
Revised Appendix 6, technical BER main text	6–7 August 2015
Clarifications	25 September–8 October 2015
ADB's "no objection" on technical BER	14 October 2015
Financial bid opening	21 October 2015
Uzbekenergo's request to rebid[a]	18 January 2016
ADB special project administration mission[b]	20–22 January 2016
ADB's rejection of Uzbekenergo's grounds for rebidding[c]	26 January 2016
ADB's proposal to the government to undertake post-qualification due diligence of responsive bidders, to be assisted by a third-party consultant under the project preparatory TA[d]	11 February 2016
ADB's follow up on the government's confirmation on the post-qualification, and retroactive extension of the project preparatory TA[d]	17 March 2016
Uzbekenergo's confirmation of post-qualification	25 March 2016
Recruitment of consultant for post-qualification under the project preparatory TA	May–June 2016
Consultant's submission of post-qualification due diligence reports	September 2016
Uzbekenergo's submission of financial BER to ADB	27 October 2016
ADB's "no objection" to financial BER and contract award	10 November 2016
Contract signing	24 December 2016

ADB = Asian Development Bank, BER = bid evaluation report, SJSC = State Joint Stock Company, TA = technical assistance.

[a] The government's tender committee decided to rebid on the following grounds: mismatch between the bidding document technical specifications and modern solar energy technology; and contradictions between the bidding document's English and Russian versions, resulting in misrepresentation of technical scores.

[b] Meetings were held between ADB and the government led by the director general of the Central and West Asia Department, and the first deputy minister and the minister of finance.

[c] ADB explained that there are no justifiable grounds for rejecting the bids and rebidding under ADB's Procurement Guidelines (2015, as amended from time to time) as the (i) bidding document technical specifications were based on the government-approved feasibility study, as endorsed by multiple stakeholders, and corresponded with up-to-date technology; and (ii) discrepancies between the bidding document's English and Russian versions did not affect the technical evaluation, as the English version prevailed over the Russian version.

[d] ADB. 2013. *Technical Assistance to the Republic of Uzbekistan for the Samarkand Solar Power Project*. Manila.

Source: ADB.