

## RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating	Mitigation Measures	Responsibility
<b>Project risks</b>			
1. Inadequate technical design of the project to ensure long-term operation	L	The project company will adopt proven technology as required by the tender documents. An independent engineer will ensure compliance with the technical requirements. Masdar, the private partner of Project 1, was selected by the government, based on its track record of successful development of solar power projects.	Government, project company
2. Issues in managing grid stability when integrating sizable renewable energy projects	M	ADB conducted a grid interconnection study for Project 1, which suggests no substantial issue in managing grid stability. Since grid-scale renewable energy is new to the country, the World Bank is providing a capacity building and support program for institutional development to ensure that Joint-Stock Company NEGU is capable of managing the variability of renewable energy.	Government, NEGU
3. Construction delay in the interconnection transmission line and inability to evacuate power	M	The project company takes responsibility for this risk under the PPA. The project company will manage the design and construct the transmission line and transfer it to NEGU. Masdar, the private partner of Project 1, was selected by the government, based on its track record of successful construction of transmission lines.	Project company
4. Prolonged effects of the COVID-19 pandemic adversely affect the performance of contractors and delay implementation	M	For ordinary supply chain disruptions, EPC contractor would be expected to investigate and/or engage an alternative supplier. In case of broader and severe supply chain impacts caused by COVID-19, the contractual arrangement will include provisions entitling the EPC contractor and/or the supplier to extend the completion date.	Government, project company
5. Long-term climate change risks	M	Project 1 has been screened for future climate risks using a GIS-based screening utilizing the UNEP PREVIEW data platform. The screening results indicate that Project 1 is located in districts that may experience a potential increase in climate events involving wind, dust storms, and temperature. Following the screening results, project components sensitive to climate risks were identified and these risks will be managed through integration of climate resilience measures into the project detailed design.	Project company
6. Environmental and social safeguard risks	M	All safeguard documents follow ADB's Safeguard Policy Statement (2009). An IEE, including an EMP, and a social safeguard due diligence report were prepared. The project company will implement the EMP, and an independent engineer to be jointly recruited by the project company and NEGU will supervise and monitor the overall implementation of the EMP. The CGIA will ensure compliance with safeguard measures and implementation requirements. Safeguard staff and consultants will be recruited to monitor EMP and resettlement plan implementation as well as third-party audits.	Government, NEGU, project company
<b>Project stakeholder risks</b>			
7. Lack of institutional capacity to manage complex PPP projects and international investors	S	ADB, together with IFIs, will mitigate the risk by regularly engaging in policy dialogues with senior government officials and providing technical assistance and capacity building in several areas, such as legal, regulatory, technical, fiduciary,	Government, ADB, NEGU

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		environmental, and social, as needed over time.	
8. Project company's inadequate capacity to develop and implement the project	L	The project company is owned by Masdar, which manages the design, construction, and operations and is an experienced sponsor with a track record of successful renewable energy development in an emerging market.	Project company
9. Uncertain financial viability and long-term creditworthiness of NEGU	S	NEGU's long-term creditworthiness and ability to fulfill its obligation under the PPA is not demonstrated. Provision of a standby letter of credit and PCG will mitigate the payment risks of NEGU. ADB will continue to support the government in broader sector reforms, including on cost recovery initiatives, through implementing the adopted electricity tariff-setting methodology and undertaking tariff adjustments on a regular basis with SOE commercialization measures.	Government, NEGU
10. Unaffordable contingent liabilities in the sector through increasing number of unsolicited private sector projects	S	ADB will closely monitor this risk through fiscal impact assessment with other IFIs, continue to advise the government on the sector policy and the advantages of competitively selected private investments, and endeavor to demonstrate such benefits through swiftly moving forward with the solar PPP investment program.	Government, ADB
11. Limited financial management capacity of NEGU	S	Sufficient and qualified financial management and accounting staff will be recruited and retained by NEGU. A capacity development program under ongoing project will help NEGU establish a robust accounting policy and upgrade its accounting and reporting systems.	Government, NEGU
<b>Other risks</b>			
12. Prolonged impact of the COVID-19 pandemic on energy demand and affordability	M	The COVID-19 pandemic has affected the power sector and NEGU through a drop in electricity demand, a change in the consumption mix, and reduced collection efficiency, resulting in a cash deficit for NEGU. The government has already taken measures to mitigate the potential risks, including through financial stimulus support for the energy sector and NEGU.	Government, NEGU
13. The intermittency of renewable energy affects the ability to manage grid stability.	M	Uzbekistan is dealing with large-scale renewable energy projects for the first time, so it is crucial to familiarize technical specialists with the proposed technology options.	NEGU
14. A financial crisis leading to a shortage in private sector credit, or a geopolitical crisis weakening private investments	M	Participation of and backstopping by IFIs helps mitigate the credit and political risks. In the extreme cases of credit and political crises, the project schedule will be adjusted to avoid and minimize the risks.	Government, ADB, NEGU, project company

H = high, S = substantial, M = moderate, L = low.

ADB = Asian Development Bank; CGIA = counter-guarantee and indemnity agreement; COVID-19 = coronavirus disease; EMP = environmental management plan; EPC = engineering, procurement, and construction; GIS = geographic information system; GW = gigawatt; IEE = initial environmental examination; IFI = international financial institution; Masdar = Abu Dhabi Future Energy Company Public Joint Stock Company; NEGU = National Electric Grid of Uzbekistan; PCG = partial credit guarantee; PPA = power purchase agreement; PPP = public-private partnership; SOE = state-owned enterprise; UNEP = United Nations Environment Programme.

Source: ADB.