

ENVIRONMENTAL AND SOCIAL ACTION PLAN FOR THE M-KAT SOLAR POWER PLANT

No.	Action	EHS and Social Risks Liability/ Benefits	Legislative or Lenders re-quirement or best practice	Resources/ Responsibility	Target and Evaluation Criteria for Successful Completion	Time-frame
PR 1. Environmental and Social Appraisal and Management						
1.1	<p>Appoint designated Community Liaison Officer and provide to the EHS manager sufficient training in ISO 14001 and OHSAS 18001 standards to enable him to develop the Environmental, Health and Safety and Stakeholder Management System and plans for the Project and implement them.</p> <p>Ensure full compliance with National legislative requirements.</p>	Delays in project implementation due to noncompliance with ESAP	EBRD PR1, par.15, best practice	Staff time, training cost/ Top management, Site Manager	<p>CLO appointed. Training undertaken</p> <p>EHS documentation reviewed by a qualified consultant and found adequate</p>	<p>(i) EHS documentation, capacity building - After start of Bank financing</p> <p>(ii) compliance with national requirements- for the entire loan duration</p>
1.2	<p>Include into tender documentation and Contractor’s contract a provision on compliance with EBRD EHS social and labour protection requirements including full compliance with national legislation.</p> <p>Select contractors that demonstrate adequate capability in EHS and labour management including managing subcontractors.</p> <p>Ask contractors to develop an EHS plan agreeable to the Company before starting any activities.</p> <p>Audit the contractor adherence to the EHS aspects of the contract, ensure timely correction of deviations.</p>	Work delays/ Good relations with authorities	EBRD PR1, par.20, ISO 14001, ISO 45001 Kazakh norms (SNiP, SanPiN, GOST), sectoral guidelines, EBRD policy	EPC contractor time/ Legal and procurement dept., EHS manager	Tender documents include ESAP requirements. Criteria for assessing contractors EHS and labour management capabilities established. Contractor EHS plan approved by the Company	During tender packages preparation and construction
1.3	In the extent practicably possible obtain from the polycrystalline modules suppliers available information on their suppliers EHS impacts like occurrence of silicosis in quartz miners, silicon furnaces operators working condition, forced labour and worst forms of child labour as well as silicone tetrachloride recycling or disposing practices that prevent hydrochloric acid leachate escape	Risk of exposure to public criticism/Good company image	EBRD PR1 International Labour Organisation conventions 29 and 105 and 182	None/EHS manager	Available with the supplier information is obtained	Prior to procurement
PR 2. Labour and working conditions						
2.1	Ensure that contractor and its subcontractors have a	Risk of work related conflicts and	EBRD PR2 ,	None / EHS	Human resource policies of all involved in the pro-	Prior to construction

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	worker representative and a human resource policy which is disclosed to workers. Provide one grievance mechanism accessible to all project related workers with the ability to complain anonymously, and include in each answer a roadmap for an unsatisfied worker to take the grievance further.	damage to assets/ Better worker relations and company image among the local community	par.20 Best practice	manager	ject entities have provision for worker representation and are disclosed. Provision for anonymous complaints have been made and answers contain a roadmap for further complaints.	
2.2	Produce annual report on implementation of grievance mechanism, types of grievances and resolutions Request the contractor to monitor subcontractors working conditions and timely disbursal of wages				Annual report on grievance mechanism effectiveness in place. Complaints on working conditions and delays in disbursal of wages resolved timely.	During construction
2.3	Develop Contractor and Suppliers Management Plan applicable to all subcontractors and core suppliers. If temporary accommodation is used, the plan should follow the IFC/EBRD Worker Accommodation Guidelines and national sanitary standards.	Good company image	EBRD PR2 IFC/EBRD Worker Accommodation Guidelines	None / EHS manager	Plan considers the need for worker accommodation and is applied to subcontractors and core suppliers.	Before EPC contractor is mobilised.
PR 3. Resource Efficiency and Pollution Prevention and Control						
3.1	Include control of the equipment exhaust excessive smoke in the internal audit checklist	Good company image	EBRD PR 3 RoK legislation	None/Site Manager	Control inserted in audit checklist	Prior to construction
3.2	Develop waste management plan to include broken solar panels utilization. Request the contractor to provide waste memos to ensure appropriate disposal location and methods, and to include this requirement in the agreement with its subcontractors.	/ Risk of contamination removed. Valuable components of broken panels utilised	EBRD PR 3	Company	1. Plan and uses the reuse-reduce-recycle-recover-safe disposal hierarchy 2. Waste chains of custody available	1. Prior to construction 2. Continuously from start of construction.
3.3	Request and control that oil drums are stored on a sheltered and bunded pad. Ensure that contractor controls fuel tank drivers use of trays under refuelling couplings and that places of small repairs of machinery have leakage containment and swapping material	Ground contamination, fines, cost of cleanup.	Best practice	Construction supervisor	Oil drums containment eliminates leakage risk. Refuelling tank trucks checks and vehicle parking areas checks available.	During construction
PR 4. Health and Safety						

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4.1	Request the contractor to develop site specific HS plan with identification of risks and to transfer its OHS policy and system requirements to subcontractors through regular HS audits	Work site specifics and risk of rare accidents with severe consequences may be overlooked	ISO 45001	EHS Manager	OHS documentation shows that subcontractors HS performance effectively controlled	Plan before construction, audit records during construction
4.2	At least for HV work, add site specific risk assessments in the local permit-to-work system and enforce register of near misses with their in depth internal analysis For operation stage develop safety provisions for an individual electrician working alone	Risk generated by unusual conditions could be missed by HS instructions Electrocution without quick aid may lead to death or permanent disability	Legislative requirements	EHS Manager	IWA provisions are in place	Before operation starts
4.3	Ensure that the fire protection belt width is at least 4m at the northern part of the site and 5m at the southern end where grass is thicker and higher. Plough the belt before each summer	Unusually strong ground fire with strong wind may surpass a standard fire protection belt around the site and damage panels	Best practice	Site Manager	No records of ground fire damage to the plant assets	Before each summer
4.4	If security guards use firearms, ensure that they know and have on site the instruction for firearms secure storage, handing over and use against vulnerable groups of population	Public unrest, injuries, company image damage, complaints	PR 4 par.17/ Legislative requirements/ EU regulations/	Site Manager	Instruction available on site and covers all vulnerable groups	Construction and operation
PR 5 Land Acquisition, Involuntary Resettlement and Economic Displacement						
5.1	Prepare Land Acquisition Closure Report including: a. Project summary b. Socio-economic and vulnerability status of 5 displaced persons (DPs) c. Minutes of the meetings/consultations held with DPs d. Entitlement matrix as per PR5 (including legislative requirements) e. Evidence and timing of the payment; f. Conclusions and recommendations: It needs to confirm or otherwise that payments were made in line with PR5 requirements/national laws.	Good company image	PR5 Best practice	None/Site manager	Closure Report available	Within 2 months after the investment

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PR 6. Biodiversity Conservation and Sustainable Natural Resource Management						
6.1	Enforce driving along surfaced with chip rock passages and make vehicle parking area as small as possible.	Soil structure damage alters vegetation for long time/ Good house-keeping	Best practice	None/Site Manager	Design and order of construction minimise risk of damage. Subcontractors contracts and performance audit checklist include this requirement.	During construction
6.2	Monitor vegetation reinstatement at damaged areas and soil for sign of wind erosion. If noted, apply effective erosion abatement measures.	Opportunity to minimise impact missed / good housekeeping	EBRD PR 6/ Best practice	Recultivation cost/Site Manager	Monitoring information is inserted in Annual ES Report to EBRD	Two vegetative seasons of operation
PR 8. Cultural Heritage						
8.1	<p>a. Check that powerline, ORU and access road construction contractors conduct archaeological surveys</p> <p>b. If archaeological sites are found, consider the line relocation from the sites protection zone. Fence and mark the sites. Inform locals about the sites and their protection status</p> <p>c. If impact on sites is unavoidable exclude sites from the State Protection List, conducting the full detailed archaeological survey and excavation.</p> <p>d. Develop and require the earthwork conducting subcontractors to follow the chance find procedures</p>	Fines and delays due to law violations. Negative public im-age.	Legislation EBRD PR 6	None/Site Manager	<p>a) Archaeological survey by licensed contractor in place</p> <p>b) Design avoids the sites protection zones. Letters to local councils with information on sites available.</p> <p>c) Authorities approve actions for the sites that will be under the project's impact</p> <p>d) Chance find procedure is in place and adhered to by the subcontractors</p>	Before powerline and access road construction starts
PR 10. Information Disclosure and Stakeholder Engagement						
10.1	Implement the Stakeholder Engagement Plan with the grievance mechanism and update it annually. Conduct information dissemination and meeting with surrounding stakeholders to increase awareness on the future construction in their area and potential impacts, and availability of grievance procedure if they have any issues/concerns.	Community issues identified and expectations managed	PR 10.– meaningful consultation	Top management / CLO	<p>SEP is up to date and implemented in full</p> <p>Grievance records properly maintained.</p>	Before and during construction and operation.
10.2	Provide general public access to information on the E&S performance of the Project and the Company	Large discrepancy between actual and perceived impact / Good company image	Best practice	CLO	Information disclosed according to SEP	During construction and operation.

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10.3	<p>With Alga Public Governance Council develop and implement a Corporate Social Responsibility Program (CSRP) for the Project and disclose it as per SEP. Allocate and disclose to the Public Governance Council the CSRP budgets (on commissioning and annual). Use the following CSRP actions selection criteria:</p> <ol style="list-style-type: none"> 1. Action cost fits the allocated to the CSRP budget and accounts for other needs; 2. Action does not overlap with the State programs; 3. Action benefit is sustainable; 4. Action benefits the local community and is not biased to a particular group or person. 	<p>Attain Community support and some community benefits from the project.</p>	<p>Best practice EBRD</p>	<p>Top management, CLO</p>	<p>Program agreed with stakeholders, disclosed as per SEP and implemented according to schedule</p>	<p>Develop CSRP during construction and implement after operation starts. After commissioning then on-going annual summary of CSRP related actions in annual report</p>
10.4	<p>Report annually on project E&S issues and benefits and implementation of action plans to Lenders and other stakeholders</p>	<p>Ensure transparency on E&S issues</p>	<p>PR 10 – Information disclosure</p>	<p>CLO</p>	<p>Reports provided in time and fully completed. Monitoring reports disclosed</p>	<p>Annually throughout Project implementation</p>