

ENVIRONMENTAL AND SOCIAL ACTION PLAN

No.	Action	Environmental & Social Risks (Liability/Benefits)	Requirement (Legislative, EBRD PR, Best Practice)	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria for Successful Implementation	Status
0	Corporate Requirements						
0.1	Maintain a Corporate EHS management system and CSR reporting for Zorlu Enerji in line with GRI4.	Need to maintain and implement best practice. Disclose annual non-financial information (CSR)	Best practice	Internal	On-going	Annual CSR report attached to Annual report.	
0.2	Work with local authority and Geothermal Association to undertake a potential cumulative environmental, heritage and social impacts from the operation of existing and reasonably foreseeable future GPP projects in the region	Mitigating the potential negative cumulative impacts is not solely the responsibility of Zorlu. Other project owners, relevant local and national authorities should also take responsibility to mitigate the potential impacts.	Best practice	External	2017-2022	Cumulative impact management plan	Zorlu will promote the development of a cumulative assessment and will support the Geothermal Association in seeking funds and resources to do such a study. The Study will be published formally when completed.

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PR1	Assessment and Management of Environmental and Social Impacts and Issues						
1.1	<p>Develop and implement an Environmental, Health & Safety and Social (EHSS) Management System</p> <p>Establish and implement an EHSS management system (ESMS) and associated operating procedures for project operations based on the requirements of ISO 14001, SA 8000 and OHSAS 18001. In particular, the ESMS shall include construction and operation phase management plans (as detailed in respective sections below) implemented across all facilities.</p>	<p>Optimisation of environmental management through a formalised system.</p> <p>Provide resources for training and monitoring of emissions</p>	<p>EBRD PR1</p> <p>Voluntary and best practice</p>	<p>Own resources, external consultants</p>	<p>Commence implementation immediately</p> <p>Continue throughout construction and operation</p>	<p>Develop and implement an EMS</p> <p>Attain ISO 14001 or equivalent certification</p> <p>OHSAS 18001 certification</p> <p>SA 8000 certification (in 2018)</p> <p>Annual EHS Report to the Bank</p>	
1.2.	<p>EHSS training of staff and contractors and EHSS Monitoring:</p> <p>Establish and implement routine monitoring procedures covering H₂S (hydrogen sulphide), noise, grievance redress, OHS statistics and waste management. Undertake min annual monitoring.</p> <p>Provide information to the Lenders on any serious accidents and incidents.</p>	<p>Optimisation of environmental and social management through training and monitoring of emissions</p>	<p>EBRD PR1</p>	<p>Own resources, external consultants</p>	<p>Assess immediately and commence implementation of required measures immediately</p> <p>Continue throughout construction and operation</p>	<p>Part of the annual report to the Lenders</p>	

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PR2	Labour and Working Conditions						
2.1	Human Resource Policies & Management System: HR Policy and HR Management System should cover all employees, contractors (EPC and O&M) and sub-contractors. The policy to provide for oversight of contractor policies/procedures. HR Policy to include freedom of association.	To ensure management of workforce in line with EBRD PR 2 requirements including prevention of child labour, forced labour, tolerance of workers associations, retrenchment principles and encouragement of non-discrimination.	EBRD PR2	Own resources	Commence implementation immediately	HR Policies and HR Management System up to EBRD PR2 standards in place Part of the annual report to the Lenders	
2.2.	Worker Accommodation: Camp should be designed and operated to meet EBRD/IFC Workers' accommodation: processes and standards. This shall be verified via a specific and independent audit as part of the wider Construction E&S Monitoring Plan	To standardise accommodation provided to workers employed by the Project Company and contractors	EBRD PR2	Own resources, EPC contractor	Assess immediately and commence implementation of required measures immediately Continue throughout construction	Part of the annual report to the Lenders	
2.3.	Grievance Mechanism Maintain formal grievance mechanisms for Zorlu, EPC and O&M employees and contractors and disseminate information about its uses to the workforce.	To provide a channel for raising workers concerns and transparent, consistent mechanism for resolution.	EBRD PR2	Own resources, external consultants (if required)	Commence implementation immediately Continue throughout construction and operation	Grievance mechanism in place and implemented	

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2.4.	Contractor Management Plan to be developed and implemented to ensure that the Project specific ES policies and ESMPs are followed and implemented by all contractors and subcontractors.	GIIP	EBRD PR2	Own resources, external consultants (if required)	Assess immediately and implement necessary measures throughout all facilities	Part of the annual report to the Lenders	
2.5	Conduct an internal labour audit every quarter during construction and operation; check all the employment documentation in place, ensure that wages and social security records are in line with regulations for all workers, compliance of contractors and subcontractors against legislations and EBRD PR2 and EBRD PR4 OHS requirements as well as actions taken to address identified issues	Effective management of labour/OHS risks	EBRD PR2 EBRD PR4 Labour Law OHS law	Own resources, external labour consultants (if required)	1Q 2017 and Every quarter throughout the construction and operation	Employee Audit Reports Progress update in the AESR to the lenders	

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PR3	Resource Efficiency and Pollution Prevention and Control						
3.1	Greenhouse Gas (GHG) Emissions: Provide a detailed breakdown of GHG emissions to Lenders on an annual basis, including an update on the success of any supplemental measures taken to reduce emissions. Data will include details of emission per MWh as well as total carbon emissions.	GIIP Monitoring of operational impacts associated with Greenhouse Gas Emissions.	EBRD PR3	Own resources, external consultants (if required)	Annually (throughout operational phase)	Part of the annual report to the Lenders	
3.2	Develop mitigation factors to reduce carbon emission in the short term to medium term, aim to operate plant for average carbon emission below the National Grid level in the long term.	The Company will try develop carbon reduction program through: <ul style="list-style-type: none"> - Design options (use of binary plants etc.) - Operational control and re-injection - Carbon capture and storage/use. - Other techniques 	EBRD requirements	Own resources	Ongoing	Report on current emissions is being undertaken in line with best practice	A review of options for additional mitigation will be made every 3 years as part of the audit.
3.3	Within 3 years of operations undertake a review of whether GHG emission can be reduced from the plant, and develop a feasibility study to be presented to Lenders on options available.	The report will review if it is possible to further reduce GHG emissions	EBRD	External	First audit in 2019	Provide information in annual report	

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3.4	<p>Within one year of commissioning undertake an EHSS audit that will include:</p> <ul style="list-style-type: none"> - Review and verify carbon emissions - Review and verify noise impacts (including monitoring) - Review cumulative impacts of projects in the areas on local community, local agricultural and nature etc. - Review and verify hydrogen sulphide emissions - Review grievance procedure as well as land allocation and use - Review implementation of SEP and SIC <p>The Report will include recommendations, which will be discussed and agreed with the Lenders and implemented by the Company to ensure compliance with the ESAP and Loan agreement conditions.</p>	<p>The commissioning report will review how the plant has been developed, and whether the ESAP and EIA requirements have been met.</p>	EBRD	External advisors	Within one year of commissioning	Executive Summary provided in annual report.	In addition the EBRD will work with Zorlu, Competent Authorities, Geothermal Association and other developers to undertake a broader cumulative assessment

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PR4	Health and Safety						
4.1	Ensure that the Occupational H&S Management Plan for the construction and operation phase of the Project is in line with EBRD PR4.	Minimise occupational injuries/fatalities due to accidents Optimised health and safety performance.	EBRD PR4 Best Practice	Own resources, external consultants (if required)	Commence implementation immediately Continue throughout construction and operation	Occupational H&S plan in place and implemented	
4.2.	Community H&S Management Plan to be prepared and implemented. Traffic Management Plans to be prepared and implemented for construction and operation phases (grievances received from locals on access to their land due to ongoing construction activities)	To ensure compliance with PR4 and support informed social impact monitoring.	EBRD PR4 Best Practice	Own resources, external consultants (if required)	Commence implementation immediately Continue throughout construction and operation	Community H&S plan in place and implemented Traffic Management Plan in place and implemented	
4.3.	Existing Emergency Response Plan, H&S Risk Assessment and any other H&S related documentation will be revised for the capacity extension Project.	Optimised health and safety performance.	EBRD PR4 Best Practice	Own resources, external consultants (if required)	Commence implementation immediately Continue throughout construction and operation	Updated Emergency Response Plan, H&S Risk Assessment and any other plan/document in place and implemented.	

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PR5	Land Acquisition, Involuntary Resettlement and Economic Displacement						
5.1	Zorlu Enerji to complete negotiations with private land owner (s) and acquire lands through consent agreements on willing-selling basis and avoid involuntary resettlement.	Avoid involuntary resettlement Effective management of relations with affected people	EBRD PR 5	Own resources	Commence assessment immediately and ensure implementation of any relevant measure	Consent agreements signed with landowners	
5.2	Zorlu Enerji will promote the development of a cumulative assessment and will support local authorities and stakeholders to identify cumulative impacts on agriculture, livestock and local tourism activities in the region and work with local authorities, other industries to mitigate the cumulative socio-economic impacts on local livelihoods.	To ensure compliance with EBRD PR5 requirements	EBRD PR5	Own resources, external consultants	Commence assessment immediately and ensure implementation of any relevant measure	Cumulative impact assessment Report on local economic activities and a mitigation plan to be submitted to the Lenders	

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PR6	Biodiversity and Living Natural Resources						
6.1	Zorlu Enerji will ensure that the existing biodiversity elements identified during the local EIA process are assessed in line with EBRD PR6 requirements including habitat assessment and species distributions. Depending on the results of the assessment Biodiversity Management Plan and/or Biodiversity Action Plan for the management of biodiversity elements will be prepared.	To ensure that conservation of biodiversity and sustainable management of natural resources are managed appropriately during the construction works	EBRD PR6	Own resources, external consultants	Ensure implementation of any relevant measure throughout construction and operation	Biodiversity management measures adopted through implementation of Biodiversity Management Plan and/or Biodiversity Action Plan (if required)	
PR8	Cultural Heritage						
8.1	Ensure that the existing Chance Finds Procedure is in line with all the requirements of PR8. Implement the Procedure for the ongoing construction activities	To ensure that any archaeological finds will be preserved during the construction process	EBRD PR8	Own resources	Commence implementation immediately Continue throughout construction	Chance Finds Procedure adopted. All staff, including EPC Contractor, trained in implementation	

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PR10	Information Disclosure and Stakeholder Engagement						
10.1	Implement the SEP, based on the updated project ESIA and stakeholder grievance mechanism. As part of the SEP maintain a register of external communications including minutes of meetings held with stakeholders.	To maintain good stakeholder engagement and framework for sharing information with the public	EBRD PR10 Best Practice	Own resources	Commence implementation immediately Continue throughout construction and operation	Report to Lenders on consultation activities, including information disclosed Report to Lenders on all grievances received and how addressed/resolved	
10.2	ESIA disclosure package to be disclosed locally and on web site throughout the life of the Project. Implement the requirements of the Lenders ESIA disclosure package and National legislation. Provide an update on the implementation of the SEP, ESAP and Social Impact Assessment (SIC)	The Lender ESIA disclosure document contains information on the project design and implementation as well as compliance. This will be used to benchmark the plants EHSS performance	ERBD PR 10	Internal	Ongoing	Report available locally and on web sites throughout the financing period.	
10.3	Zorlu Enerji to engage key stakeholders to identify and manage cumulative impacts in the region on a regular basis	Effective management of risks and cumulative impacts	PR 10, PR 1	Own resources	1Q 2017- Continue throughout construction and operation	Regular Stakeholder engagement meeting minutes Actions agreed CSR projects to address cumulative issues Regular progress updates.	