

**GULF OF SUEZ 2 – RED SEA WIND ENERGY
ENVIRONMENTAL AND SOCIAL ACTION PLAN
FINAL (NOVEMBER 2022)**

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
PR1	Assessment and Management of Environmental and Social Impacts and Issues						
1.1	The Company will submit to the EBRD, and other Lenders, an environmental and social (E&S) report describing the E&S performance of the Project and the implementation of this ESAP. This report may also be compiled by an independent Lenders E&S Monitoring Consultant (LESMC), or equivalent.	E&S reporting	EBRD E&S Policy (2014) and PR1	Company Or LESMC	Every four months during construction Annually during operation	E&S monitoring reports satisfactory to the EBRD, and other Lenders (if required).	

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1.2	<p>The Company (Red Sea Wind Energy) will develop and implement an appropriate environmental and social management system (ESMS) for the Project in line with PR1/PS1 requirements and in conformance with commitments articulated in the Project ESMS Manual, including lender and local E&S requirements. The ESMS will reflect the 2022 Project design. The ESMS will apply to the Project (GoS 2, 500 MW Wind Power Project to be developed and operated by the Company) and incorporate an E&S policy, procedures, plans with mitigation measures including those developed during the ESIA process, contractor oversight and monitoring requirements as well as E&S reporting, and the necessary resources and structures to implement the ESMS.</p> <p>The ESMS will apply during the construction and operation phases of the Project.</p>	E&S risk and impact management	PR1/PS1	Company, with Consultant support	<p>Construction phase elements of ESMS: 1 month prior to construction commencing</p> <p>Operation phase elements of ESMS: 3 months prior to operations commencing</p>	<p>ESMS in place appropriate to nature of project.</p> <p>ESMS documentation</p>	
1.3	<p>EPC and LTSA Contractors will develop and implement their own ESMSs in line with the Project ESMS. These ESMS will include the necessary resources, structures, policies, procedures, plans, monitoring and reporting requirements to deliver their responsibilities in line with the requirements of the Project ESMS and Project E&S commitments (lender and local E&S requirements). The EPC and LTSA Contractors will ensure that the ESMS requirements extend to their contractors and subcontractors.</p>	E&S risk and impact management	PR1/PS1	EPC and LTSA contractors with Company oversight	Prior to start of construction	EPC and LTSA contractor ESMSs approved by the Company and the EBRD, and other Lenders (if required).	

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1.4	<p>The Company will ensure that sufficient staff and contractor resources are allocated to E&S management at all times (during construction and operation). The Company will employ, at a minimum, a Project E&S Manager and a Community Liaison Officer, who will be supported by the Owner's Engineer (OE) and, as needed, E&S consultants.</p> <p>The Company shall require the EPC Contractors and other contractors to appoint sufficient counterparts to these staff, including appropriate Health & Safety Officers to ensure satisfactory oversight of the entire construction labour force.</p>	E&S risk and impact management	PR1/PS1	Company	<p>Project E&S manager and CLO – 2 months prior to construction</p> <p>OE and EPC E&S resources: prior to start of construction</p>	<p>E&S management resources in place.</p> <p>Organogram complete with names and roles/responsibilities.</p>	

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PR2	Labour and Working Conditions						
2.1	<p>The Company will develop and implement a human resources policy and associated procedures and plans. The policy and associated procedures will apply to all Project workers, including contractors and subcontractors. All workers will receive written documentation concerning the terms and conditions of their employment including their rights under Egyptian labour law, as per PR2 requirements. This shall include a workers' grievance mechanism that will have to be made available to workers, irrespective of their employer (See 2.2). The policies, procedures and plans should adhere to national legislation and EBRD/IFC requirements under PR2/PS2 and must cover workers contracts, working hours, wages, benefits, conditions of work, contract termination, right to join union or elect worker' representative, adherence to non-discrimination and equal opportunity practices, and provisions for retrenchment. It should clearly state that child labour and forced labour are prohibited.</p> <p>The Company will ensure that the policy, procedures, and plans are reflected in EPC documentation and implemented for all contractors. The Company will ensure that contractors have the capacity and experience, and ability to implement PR2/PS2 requirements and will monitor contractor adherence to such requirements.</p> <p>Human resources policy and associated procedures and plans would include a local hiring and training strategy or similar. Implementation will be supported by the relevant contractors.</p>	Labour risk management	PR2/PS2	Company	<p>HR policies, procedures and plans in place prior to construction.</p> <p>HR policies, procedures and plans implemented during project life cycle</p>	<p>HR policies, procedures and plans satisfactory to EBRD, and other Lenders (if required).</p> <p>HR policies, procedures and plans implemented and communicated to all Project workers.</p> <p>Contractor monitoring against PR2/PS2 requirements.</p>	

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2.2	The Company will implement a worker grievance mechanism as per PR2/PS2 requirements and ensure that EPC and LTSA Contractors set up and implement similar workers' grievance mechanisms.	Grievance management	PR2/PS2	Company	Prior to construction works commencing	Worker grievance mechanisms in place.	
2.3	The Company will ensure that EPC Contractors have in place an appropriate workers' accommodation plan in line with EBRD/IFC guidelines on Workers' Accommodation: Processes and Standards.	Labour risk management	PR2/PS2	Company	Prior to start of construction and ongoing implementation	Worker accommodation plan(s) in place satisfactory to EBRD, and other Lenders (if required).	
2.4	The Company will integrate into the ESMS an approach and requirements for managing and monitoring potential risks associated with the core suppliers of the Project during construction and operations. This will include a position statement on avoiding supply chain risks (forced labour, child labour, risk of material harm to workers) and requirements for supplier risk screening, legal covenants for tenders and contracts, supplier verification and auditing, and supply chain traceability where risks are identified. During construction, the Company will require its EPC Contractors to align their procurement practices with the ESMS and report to the Company. The Company, or their representatives, will undertake audits as necessary.	Supply chain management	PR2/PS2	Company and EPC contractors	Prior to contracting core suppliers During construction and during operation	Supply chain risk management and monitoring approach integrated into ESMS and cascaded down to EPC contractors. Supply chain risks considered and controls implemented. Evidence of implementation (records, labour audits, screening results).	

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2.5	The Company will contractually require the wind turbine supplier (which is also providing O&M services as LTSA) to commit to implementing a robust supplier management and traceability system for their pre-screened Project core suppliers to avoid critical labour risks in the wind turbine supply chain.	Supply chain management	PR2/PS2 Good International Practices ILO labour standards	Company	Prior to contracting wind turbine supplier	Appropriate requirements in wind turbine supply and O&M services contractor contracts to avoid critical labour issues and risks.	
2.6	The Company will develop a security management plan in accordance with the Voluntary Principles of Security and Human Rights, including procedures and code of conduct. The Plan will implement the Security strategy outlined in the ESMS Manual. Security personnel should be trained to avoid use of excessive force and vetting for past offences should be undertaken. Avoidance of armed security at all times.	Security risk management	PR2/PS4	Company	Prior to construction	Security management plan in place satisfactory to EBRD, and other Lenders (if required).	
PR3	Resource Efficiency and Pollution Prevention and Control						
3.1	The Company will quantify Project GHG emissions. The Company will ensure that the EPC Contractors adopts measures to minimise GHG emissions during the construction phase, where possible.	GHG reduction	PR3/PS3	Company	Annually during construction	Project GHG emissions quantified. Evidence of measures taken to reduce Project GHG emissions during construction, where relevant.	
3.2	The Company will ensure that the EPC Contractors prepare and enforce Air Quality and Noise Management Plans for the construction phase to mitigate impacts of noise and emissions (dust, etc.) on workers.	Worker health and safety	PR3/PS3	Company	Plan in place prior to construction Implemented during construction	Air Quality and Noise Management Plan(s) in place and implemented	

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3.3	The Company will ensure that the EPC Contractors prepare a robust management plan to manage wastewater and its treatment at the Ras Ghareb treatment plant and to manage disposal of waste (a waste management plan). This would include a waste manifest system. The Company will ensure that waste disposal facilities are visited and reviewed to ensure that they are well managed and appropriate for the waste to be disposed.	Waste management	PR3/PS3	Company	Plan in place prior to construction Implemented during construction	Waste and Wastewater Management Plan(s) in place and implemented Audit reports.	
3.4	The Company will ensure that the EPC Contractors prepare and enforce a Water Management Plan with adequate measures to minimise water use on site.	Water use	PR3/PS3	Company	Plan in place prior to construction Implemented during construction	Water Management Plan (s) in place and implemented	
PR4	Health and Safety						
4.1	The Company will oversee and monitor the activities of the EPC Contractors, and their contractors and subcontractors, during construction to ensure that all H&S risks are identified and adequately managed and addressed. H&S performance will be monitored against the ESMS, management plans and H&S performance targets. Performance will be reported and feedback provided.	Contractor H&S performance	PR4/PS2	Company with support of OE.	During construction	Contractor and subcontractor H&S performance overseen, monitored and reported	
4.2	The Company will develop and implement a Workers' Influx Management Plan. This may include the support from EPC Contractors and/or consultants. If construction works overlap with other major construction projects in the area, the Company will conduct an assessment of potential cumulative impacts of worker influx to the area and implement mitigation measures if necessary.	Worker influx management	PR4/PS4	Company	Plan in place prior to construction Implemented during construction Cumulative assessment conducted if required.	Workers' Influx Management Plan in place satisfactory to EBRD, and other Lenders (if required).	
4.3	The Company will ensure that the EPC Contractors develop and implement a Transport Management Plan for the transportation and movement of heavy equipment from the receiving port to the site during construction.	Transport risk management	PR4/PS4	Company	Plan in place prior to construction Implemented during construction	Transport Management Plan(s) in place satisfactory to EBRD, and other Lenders (if required).	

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4.4	<p>The Company will develop a hazard map to avoid locating any onsite facility in potentially hazardous areas, e.g. flood risk areas.</p> <p>The Company will develop and implement a Natural Hazard Management Plan to demonstrate the respect of the boundaries of the existing wadis and avoid the installation of any fixed structures inside the wadis or along their boundaries. The plan will also need to include the adequate signalling to be positioned on the roads inside the Project site in case of flood events.</p>	Natural hazard risks management	PR4/PS4	Company	<p>Hazard map and Natural Hazard Management Plan in place prior to construction</p> <p>Implemented during construction</p>	<p>Hazard map in place</p> <p>Natural Hazard Management Plan in place</p>	
4.5	<p>The Company to ensure that the EPC Contractors identify possible emergency scenarios for the construction phase and prepare an Emergency Preparedness and Response Plan to respond to them. The operational phase should be considered as far as this may be relevant.</p>	Emergency management	PR4/PS1	Company	<p>Emergency Preparedness and Response Plan in place prior to construction</p> <p>Implemented during construction</p>	<p>Emergency Preparedness and Response Plan(s) in place</p>	
PR6	Biodiversity and Living Natural Resources						
6.1	<p>The Company will ensure that an appropriate Biodiversity Management Plan or similar is developed and implemented during the construction phase. The plan is expected to include specific measures to mitigate construction phase impacts to biodiversity, including priority biodiversity such as the Egyptian Spiny-Tailed Lizard (see Project Critical Habitat Assessment). The Company will oversee and monitor the implementation of the plan.</p>	Biodiversity impact management	PR6/PS6	Company	<p>Biodiversity Management Plan (or similar) in place before construction.</p> <p>Implemented during construction</p>	<p>Biodiversity Management Plan (or similar) in place satisfactory to EBRD, and other Lenders (if required)</p> <p>Reporting on implementation</p>	

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6.2	<p>The Company will ensure that pre-construction biodiversity screening surveys are undertaken prior to civil works commencing to ensure that impacts to terrestrial biodiversity, including priority biodiversity such as the Egyptian Spiny-Tailed Lizard (see Project Critical Habitat Assessment), are avoided and/or minimised as per the Project Biodiversity Management Plan (see ESAP Action 6.1).</p>	Terrestrial biodiversity impact management	PR6/PS6	Company	Surveys prior to construction works	Surveys undertaken and records maintained.	
6.3	<p>The Company will ensure that an Operations Phase Biodiversity Management Plan (BMP) or equivalent is in place and is implemented and which will contain detailed protocols on (i) shutdown on-demand; (ii) fatality monitoring; (iii) bias corrections trails; (iv) calculating fatality rate estimates; (v) migratory bird monitoring; and (vi) adaptive management.</p> <p>The adaptive management component of the BMP will take into consideration the fatality thresholds presented in the Cumulative Effects Assessment and which apply to the Project.</p> <p>Where these activities are undertaken by a third party, the Company will ensure that works are undertaken in line with PR6/PS6, ESIA commitments and good international practice for the sector.</p>	Bird collision risk management	PR6/PS6	Company	BMP in place 6 months prior to operations	<p>Operations Phase Biodiversity Management Plan (BMP) or equivalent in place and implemented. BMP satisfactory to EBRD, and other Lenders (if required).</p> <p>Implementation reports and data available.</p>	

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6.4	<p>The Company will ensure that bias correction trials for scavenger removal and for searcher efficiency in both autumn and the spring seasons are undertaken for at least the first three years of project operations with the aim to develop correction factors. The Company will also ensure that an expert wind-wildlife specialist is retained to develop fatality rate estimates with statistical correction factors and implement this work in the field.</p> <p>The Company will also begin identifying potential carcasses for the use in scavenger removal trials (avoiding the use of chickens) as the selection of the carcass is key to the accuracy of the results. The Company will also maintain a freezer on the project site for the storage of carcasses.</p> <p>Where these activities are undertaken by or together with a third party, the Company will ensure that works are undertaken in line with PR6/PS6, ESIA commitments and good international practice for the sector.</p>	Bird fatality monitoring	PR6/PS6	Company	<p>Procedures/plan in place 6 months prior to operations</p> <p>Implemented during operations for at least the first three years.</p>	<p>Procedures, or equivalent, in place and implemented, and satisfactory to EBRD, and other Lenders (if required). Implementation reports and data available.</p>	
6.5	<p>The Company will develop reporting procedures for the following: (i) reporting fatalities of priority bird fatalities to authorities and EBRD (and the Lenders) in a timely manner (within a week); (ii) in the event of a fatality of a priority species, a review of the incident by the responsible expert ornithologist; and, (iii) bi-annual reports submitted to the EBRD (and the Lenders) including the results of in-flight monitoring, priority birds records, shutdown on demand incidents (including 'near-misses') and energy production lost due to shutdowns, any fatalities, results of bias correction trials and adaptive management.</p>	Bird fatality reporting	PR6/PS6	Company	<p>Procedures in place 6 months prior to operations.</p> <p>Implemented during operations.</p>	<p>Procedures, or equivalent, in place and implemented, and satisfactory to EBRD, and other Lenders (if required). Reports to the EBRD and the Lenders</p>	
6.6	<p>The Company will (i) collaborate with EETC on the installation of bird flight deterrents on the 220 kV transmission line (TL) dedicated to the Project and the new 500kV TL from Substation 4; and (ii) ensure that bird and bat fatality monitoring is conducted along both the 220 kV and 500kV TLs. Fatality monitoring along TLs should be conducted using standardised field and analytical methods consistent with those used for wind turbines.</p>	Bird fatality reduction and monitoring	PR6/PS6	Company	<p>Bird flight deterrents installed on 220kV TL and the 500kV TL prior to operations.</p> <p>Fatality monitoring implemented during operation of TLs.</p>	<p>Bird flight deterrents in place</p> <p>Fatality monitoring conducted along the TLs</p>	

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6.7	The Company will ensure that an organisational structure is in place, including Company personnel, for the operational phase able to support the implementation of the mitigation and monitoring measures required, including as an example, a Project ornithologist or biodiversity manager.	Biodiversity risk management resources	PR6/PS6	Company	Structure presented 6 months prior to operation	Organisation structure presented	
6.8	The Company will liaise with relevant national authorities, organisations and RCREEE to ensure that appropriate resources are available to deliver the Biodiversity Management Plan, specifically the turbine shut down on demand programme and fatality monitoring. This would include support for the training and capacity building of local bird observers and other resources required.	Biodiversity risk management resources	PR6/PS6	Company	During life of project	Appropriate evidence provided in Company initiatives and activities.	
6.9	The Company will contribute to management actions that further the conservation of migratory soaring birds in the Gebel Al Zeit IBA. This would involve engagement with various third parties, including EEAA and RCREEE, and the provision monitoring data.	Biodiversity risk management	PR6/PS6	Company	During operations	Evidence of collaboration	

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6.10	<p>The Company will utilise the VPs envisaged for implementation of the turbine shut down on demand programme as well as new VPs to be located to the east and west of the Project area to collect information on how migratory soaring birds (MSB) use the Project area as well as the coastal plain to the east of the site and the area proposed as a non-developed "corridor" to mitigate for potential barrier effects on MSBs to the west of the site. Monitoring frequency for new VPs should be two days a week at a minimum during spring and autumn bird migration seasons. For VPs envisaged for implementation of the turbine shut down on demand programme, the priority for observations during periods of high collision risk should be on collision risk avoidance and MSB movement data gathered where possible, including characterisation of avoidance behaviour and flight path mapping. The Company will contract a qualified wind/wildlife consultant(s) to design a detailed study plan to include proposed survey and analytical methods, as well as reporting outputs. Groundtruthing will be required to determine the number and location of additional VPs to be arrayed to the east and west of the Project area. Reports will be produced for each season.</p>	<p>Migratory soaring bird risk – assessing proposed corridors to mitigate barrier effects</p>	PR6/PS6	Company	During first three years of operations	<p>Survey/monitoring plan, in place and surveys/monitoring implemented, and satisfactory to EBRD, and other Lenders (if required). Reports for each season's survey to the EBRD and the Lenders.</p>	

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6.11	<p>The Company will expand on the existing ESIA and the surveys/monitoring undertaken for ESAP Action 6.10 to assess spatial and temporal patterns of MSB activity and use of the Project area and the proposed corridors by conducting an additional analysis using multiple sources of information collected by the Project, as well as data provided by stakeholders – notably RCREEE, available at the date of the kick off of the analysis. There are four principal objectives of this analysis: a) to assess whether MSB use the areas to the east and west of the site and avoid the project, b) to assess the extent to which the corridors may have minimised or mitigated barrier or collision risks at the Project; c) to assess the extent of interannual variation on MSB seasonal activity or use within the Project area for all seasonal study years in which comparable survey data are available – including, for example, using applicable data from surveys completed in 2017 as part of the SESA, and; d) to assess the overall results of implementation of the first three years of ATMP implementation. Key outcomes are to include: a) dissemination of recommendations based on the evidence and analytical outcomes to Project stakeholders; b) incorporation of the findings and/or recommendations made in the analysis into the Project's Adaptive Management Plan - a key component of its Biodiversity Management Plan (BMP; ESAP 6.3). The Company will contract a qualified wind wildlife consultant(s) to design and implement the analysis. A detailed study plan will be developed to include proposed analytical methods, as well as reporting outputs.</p>	<p>Migratory soaring bird risk – assessing proposed corridors to mitigate barrier effects</p>	PR6/PS6	Company	Conducted within 4 months of completion of year 3 operations surveys/monitoring.	<p>Consultant retained. Study plans agreed with EBRD and the Lenders by end 2023</p> <p>Report to the EBRD and the Lenders, including recommendations.</p>	
PR8	Cultural Heritage						
8.1	<p>The Company will ensure that the EPC Contractors concerned with civil works prepare and implement a Chance Find Procedure for construction in case of new cultural heritage discoveries during construction work.</p>	<p>Managing potential chance finds</p>	PR8/PS8	Company	<p>Procedure in place prior to earth works.</p> <p>Procedure implemented during earth works</p>	<p>Chance Find procedure in place and implemented.</p>	

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PR 10	Information Disclosure and Stakeholder Engagement						
10.1	The Company will implement and maintain the Project Stakeholder Engagement Plan, as well as the public grievance mechanism. Ensure that priority is given, and resources allocated, to implement stakeholder engagement and communication activities during the construction phase.	Stakeholder engagement and information disclosure	PR10/PS1	Company	During all project phases	Stakeholder Engagement Plan and public grievance mechanism implemented and records maintained.	