

16 DECEMBER 2024

FINAL

ACWA 1.1 GW WIND POWER PLANT, EGYPT

Environmental and Social Action Plan

ESAP #	Action	Environmental & Social Risks (Liability/Benefits)	Requirement (Legislative, EBRD PR, AfDB OS, Best Practices)	Resources, Investment Needs, Responsibility	Timetable	Target and Evaluation Criteria for Successful Implementation	Status
PR1, OS1, PS1: Assessment and management of environmental and social risks and impacts							
1.1	<p>The Company will ensure that an ESIA is completed for the Overhead Transmission Lines (OHTL) that meets EBRD's PRs, AfDB OSs, IFC PSs, national and local requirements, as well as good international practice for the sector (e.g., for electrical transmission). The ESIA including supporting documentation will be undertaken by suitability skilled and experienced E&amp;S specialists. The ESIA will include an assessment of flood risks, considering climate change, and present mitigation measures to be included in the design.</p> <p>The ESIA will be subject to independent review by an E&amp;S consultant appointed by the Project Sponsor to determine its alignment with lender E&amp;S standards and the appropriate assessment and mitigation of risks and impacts. The ESIA will include a formalised, participatory disclosure and consultation process in line with lender standards and regulatory requirements.</p> <p>Project will ensure the OHTLs for the Project obtain approval from the Egyptian Environmental Affairs Agency (EEAA).</p>	E&S assessment of risks and impacts	PR1, OS1, PS1 PR2, OS2, PS2 PR3, OS3, PS3 PR4, OS4, PS4	Company	Prior to construction of the OHTLs	<p>ESIA for OHTL completed and independently reviewed by an E&amp;S consultant appointed by the Project Sponsor.</p> <p>ESIA disclosed by the Project and relevant Lenders.</p> <p>EEAA approval for the OHTL</p> <p>ESIA and EEAA approval mitigation measures implemented.</p>	
1.2	Provide to the Lenders written confirmation from the Egyptian Government confirming that the southern plot is the only plot available to the Project (in addition to the northern plot) and no alternatives are available to the Project.	Alternatives	PR6, OS6, PS6	Company	Prior to financial close	Letter from Egyptian government authorities (eg NREA) in relation to the Southern Plot.	
1.3	<p>Maintain a permits register and obtain all permits and licences for construction and operation of the Project and prior to activities commencing for which they are required to be in place. They include the following:</p> <ul style="list-style-type: none"> <li>• Egyptian Environmental Affairs Agency (EEAA) approval</li> <li>• Land use permit;</li> <li>• Mine Clearance Permit;</li> <li>• Licence of Excavation (including disposal of construction waste);</li> <li>• Construction Permit;</li> <li>• Environmental batching plant permit;</li> <li>• Radio frequency approval;</li> <li>• Licence for the handling and storage of hazardous waste;</li> <li>• Approval for emergency response and firefighting plans;</li> <li>• Primary Site Access Route equipment transportation permit and heavy equipment transportation permit;</li> <li>• Construction and Operation Permit for Private Investors – Temporary Permit - to allow construction of project; and</li> <li>• Construction and Operation Permit for Private Investors – Permanent Generation Licence – to carry out production, distribution or sale of electricity.</li> </ul>	Legal compliance	PR1, OS1, PS1 National permitting requirements	Company	Prior to construction and operation	Construction and operation permit register in place	

1.4	Ensure that the conditions of the Environmental Permit issued by the EEAA on 18 July 2024, are implemented in full.	Legal compliance.	PR1, OS1, PS1 National permitting requirements.	Company.	As per timeline stipulated in the Environmental Permit.	Discharge of permit conditions by the EEAA.  LESA monitoring reports to lenders to include updates on the implementation of EEAA conditions	
1.5	The Project will develop and implement a comprehensive Environmental and Social Management System (ESMS), including environmental and social policy, that aligns with the requirements of EBRD PR1, AfDB OS1 and IFC PS1, good international practice and local E&S regulations and commensurate with the E&S risks and impacts of the project. This system will allow for the identification, evaluation, and mitigation of environmental and social risks of projects, as well as comply with regulatory requirements and lender environmental and social standards. The ESMS manuals for the Project are to be further developed and finalised prior to construction commencing.  As part of the Project ESMS, and prior to work start, Construction-ESMPs and Operation-ESMPs including sub-management plans will be required to be developed and cascaded by the Company to the EPC and O&M contractor after their clearance by the LESA.	E&S risk and impact management	PR1, OS1, PS1	Company, EPC and O&M contractors	Prior to construction and operation	Project ESMS finalised, approved and implemented	
1.6	The Project will establish an HSE department and OHS committee to comply with the provisions of Ministerial Decree 134/2003 when their workforce reaches 50 employees or more. The OHS committee will receive basic OHS training and meet on a monthly basis and maintain monthly meeting minutes as is required by Ministerial Decree 134/2003.	E&S risk and impact management.	PR1, OS1, PS1 Ministerial Decree 134/2003.	Company EPC O&M (if employees exceed 50 or more in the operational phase).	Prior to workforce reaching 50 employees or more.	Project HSE departments and OHS committees in place (evidenced by minutes of inaugural meeting) to comply with the provisions of Ministerial Decree 134/2003 when their workforce reaches 50 employees or more.	
1.7	Project EPC and O&M contractors will develop and implement their own ESMSs in line with the project ESMS and Project ESMS requirements. 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. The EPC and O&M Contractors will ensure that the ESMS requirements extend to their contractors and subcontractors through contracting provisions, awareness raising and monitoring.	E&S risk and impact management	PR1, OS1, PS1	Company, EPC and O&M contractors	Prior to start of construction and operation	EPC and O&M contractor ESMSs in place appropriate to nature of project.	

1.8	<p>The Project ESMS will be supported by appropriate staff and resources as detailed in the finalised ESMS manuals. The Project will employ, at a minimum, a Project E&amp;S Manager, a Community Liaison Officer (CLO), and an HR manager (familiar with internationally funded projects and issues around managing of subcontractors and casual labour), who will be supported by the Owner's Engineer (OE) and, as needed, E&amp;S consultants. In addition, a Biodiversity Manager and Wind and Wildlife Expert will be required during the construction and operational phase.</p> <p>Contractually require the EPC and O&amp;M contractors, as well as Owner's Engineer (OE) to appoint sufficient E&amp;S and HR staff to oversee the Project's E&amp;S management at all times (during construction and operation) in line with the ESMS, lender and local E&amp;S requirements. The EPC contractor's team shall include an ecologist throughout the construction phase of the Project.</p> <p>The Project shall require the EPC Contractors and other contractors to appoint sufficient counterparts to Project E&amp;S roles, including appropriate Health &amp; Safety Officers and HR staff to ensure satisfactory oversight of the entire construction labour force.</p>	E&S risk and impact management	PR1, OS1, PS1	Company, EPC and O&M contractors	Prior to start of construction and operation	Project and contractor E&S staff appointed for the project with organizational chart and responsibilities available, evidenced by suitable CVs and employment contracts or abstracts of contracts.	
1.9	<p>Project to develop a formal supplier and contractor selection process (a supply chain management system) to include environmental and social selection criteria and to include processes for taking action to address environmental and social issues identified. Selection criteria to consider the past performance of suppliers, contractors, or intermediaries with regard to labour management (i.e., child labour, forced labour, etc.) and occupational safety and health; and their current capacity to implement the requirements of EBRD's PR2 and PR4, IFC's PS2 and AfDB OS2 and OS4. Process documentation 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.</p>	Supply chain risk assessment	PR1, PR2 OS1, OS2 PS1, PS2	Company	Prior to construction	Formal supplier and contractor selection process (a supply chain management system) in place at the Project level.	
1.10	<p>Contract documentation for the EPC and Operations and Maintenance (O&amp;M) contractor to include environmental, health, safety and social requirements. These will include as a minimum:</p> <ul style="list-style-type: none"> <li>• Complying with all of the conditions listed in the EEAA's environmental permit and ESIA's</li> <li>• Complying with and explicitly referencing local environmental, health, safety and labour laws and regulations and EBRD/AFDB/IFC E&amp;S standards</li> <li>• Supply chain requirements (as per the financing documents)</li> <li>• Complying with Project's ESMS</li> <li>• Preparation of a project specific ESMS</li> <li>• Ensuring sufficient HSE and labour management personnel are present onsite</li> <li>• Environmental, health, safety and social reporting requirements</li> <li>• Right of site access of Project, the lenders and their advisors.</li> <li>• Ensuring all of the above minimum requirements apply to all subcontractors.</li> <li>• Presenting a detailed E&amp;S budget required to implement each of the items listed above.</li> </ul>	E&S risk and impact management	PR1, OS1, PS1	Company	Prior to financial close	Tender and contract documentation includes environmental, health, safety and social, including supply chain requirements - evidenced by relevant and validated clauses in documentation.	

1.11	<p>The Project will undertake a risk assessment of the EPC contractor to identify the risk of any potential human rights risks and issues.</p> <p>Develop and implement a Contractor Management Plan that guides monitoring for ongoing compliance with E&amp;S requirements.</p>	Supply chain risk assessment	PR1, PR2 OS1, OS2 PS1, PS2	Company	<p>Prior to financial close for EPC contractor risk assessment</p> <p>Contractor Management Plan prior to construction.</p>	Contractor Management Plan	
1.12	<p>Project Sponsors will contractually require the wind turbine supplier to commit to implementing a robust supplier management and traceability system for their pre-screened suppliers to avoid labour risks in the wind turbine supply chain.</p> <p>The wind turbine supplier will be required to report to the Project on implementation of its supply chain (SC) commitments on a semi-annual basis using an agreed reporting template with relevant supporting materials.</p> <p>If required, The Project can request the 3rd party on-site verification of the selected facilities of wind turbine vendor's suppliers to confirm that the wind turbine components were sourced from the ring-fenced suppliers.</p>	Supply chain management	PR2, OS2, PS2 Good International Practices ILO labour standards	Company	<p>Prior to contracting wind turbine supplier. Agreed in principle prior to Project decision making by lenders</p> <p>Semi-annual reporting on SC commitments status</p> <p>After the components have been produced/assembled</p>	<p>Appropriate requirements in wind turbine supply and O&amp;M services contractor contracts to avoid labour issues and risks.</p> <p>Semi-annual monitoring report on SC commitments</p> <p>On-site verification report of the wind turbine vendor's selected supplier's facilities.</p>	
1.13	<p>Project Sponsor (via the Global Agent) will ensure that a Lenders' Environmental and Social Advisor (LESA) is contracted to undertake independent environmental and social monitoring (including a site visit) of the Project quarterly during construction and semi-annually (twice a year) during the first two years of operation. The LESA will have a duty of care to the lenders and issue a report after each site visit describing the Project's E&amp;S performance, and compliance with Lender environmental and social standards (Performance Standards as per the CTA) and the implementation of this ESAP. Lenders may agree with the Project Sponsor/Global Agent to extend the duration of the LESA's assignment depending on the Project's E&amp;S performance.</p> <p>The Project Sponsor will submit to the Lenders and to the LESA a monthly environmental and social report describing compliance with the lenders environmental and social standards, the implementation of this ESAP and the Project's E&amp;S performance.</p> <p>Project Sponsor will submit to the lenders an annual report summarizing the annual E&amp;S performance of the project.</p>	E&S reporting	PR1, OS1, PS1	Company	<p>Appointment of LESA to conduct monitoring – prior to first disbursement.</p> <p>LESAs site visits and reporting: Every three months during construction and semi-annually for the first two years of operations.</p> <p>Project sponsor reporting: Monthly during life of the Project and an annual report.</p>	<p>LESA terms of reference satisfactory to the Lenders</p> <p>E&amp;S monitoring reports by Project and LESA satisfactory to the Lenders.</p> <p>E&amp;S compliance, ESAP implementation and Project E&amp;S performance satisfactory to the Lenders.</p>	
1.14	<p>Prepare environmental register, hazardous waste and substances register for the Project according to Law 4/1994. Ensure the environmental register contains updated information on air quality, noise, light intensity, heat stress, waste management and emergency response planning.</p>	E&S reporting	Law 4/1994	Company	Prior to construction commencing.	Environmental register completed in compliance with Law 4/1994	
PR2, OS2, PS2: Labour and working conditions							

2.1	<p>Project to adopt and implement the HR policy and procedures developed by the Project Sponsors in line with national law, EBRD PR2, AfDB OS2 and IFC PS2. HR policy and requirements will apply to all project contractors in line with PR2. Human resources policy and associated procedures and plans to include a Local Recruitment Management Plan and training strategy or similar. Implementation will be supported by the relevant contractors. The HR Policy will cover the following:</p> <ul style="list-style-type: none"> <li>• Approach to managing the Project workforce, including third party and supply chain</li> <li>• Human rights</li> <li>• Working conditions and terms of employment</li> <li>• Freedom of association / collective bargaining</li> <li>• Child labour and forced labour</li> <li>• Equal opportunities and non-discrimination</li> <li>• Prevention of and adequate response to GBVH</li> <li>• Oversight provided of contractor policies/procedures</li> <li>• Effective worker grievance mechanism, including channel to report grievances anonymously</li> </ul> <p>Ensure that the labour requirements are cascaded to contractors.</p> <p>Worker grievance mechanism to be available to all workers including contractor workers where required. Consideration to be given to the handling of sensitive grievances.</p> <p>Consideration be given to the development of Gender Action Plans that outline measures to prevent and address sexual harassment, intimidation, and/or exploitation and promote equal opportunities for women.</p>	Worker risk management	PR2, OS2, PS2	Company, EPC and O&M contractors	4 months prior to the construction	<p>HR policies, procedures and plans satisfactory to lenders</p> <p>Grievance mechanism available to all workers including sub-contractors.</p> <p>Cascade of HR requirements to contractors.</p> <p>Local Recruitment Management Plan and training matrix.</p> <p>Documented information on the policies and procedures provided to onboarded workers, including clearly communicating their rights – evidenced within an onboarding procedure.</p>	
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2.2	<p>Ensure that labour and working conditions compliance monitoring is undertaken during construction and which is to include the following:</p> <ul style="list-style-type: none"> <li>Quarterly labour and working condition audits conducted by a third-party external provider and inspecting aspects including labour contracts, safety inspections, records of incidents, grievance records etc. to ensure compliance with national law and international standards. The first labour audit needs to be completed as soon as workforce starts mobilizing to the project site.</li> <li>Weekly monitoring of workers of all contractors through random spot checks of workers contracts, payroll, overtime, awareness, and use of project grievance mechanism; through interviews and review of workers files;</li> <li>Weekly review of worker grievance logs (including contractors and subcontractors on site);</li> <li>Weekly review of training records; and</li> <li>Monthly reporting on compliance against project HR policies and procedures</li> <li>Regular training to workers on key HR procedures, including grievance mechanism, GBVH procedures, working conditions (minimum wage, working hours, over time requirement) and health and safety</li> </ul> <p>Migrant workers will need to be identified to ensure that their conditions of employment are equivalent to that of non-migrant workers.</p> <p>Ensure that the PR2/OS2/PS2 labour requirements are cascaded to the EPC Contractor and sub-contractors to enable the project to carry out a labour audit as/when required and perform regular enhanced reporting on labour compliance with PR2/OS2/PS2.</p>	Worker risk management	PR2, OS2, PS2	Company, EPC and O&M contractors	During construction	<p>Weekly inspection records  Monthly reports  Identification of migrant workers.  Copy of contractor worker training material and training calendar  Quarterly external labour and working conditions audits in compliance with Egyptian law and PS2/PR2. Scope of audits to include review of risks related to migrant workers.  ToR and labour consultant approved by lenders</p>	
2.3	<p>Ensure that the site has basic services for the workforce, including seasonal bird observers, such as security arrangements; appropriate work temperature; safe food; drinking water; access to safe exit in emergency conditions; segregated toilets, washing facilities and sleeping areas for women and men; and access to means of communication with areas outside the project boundary.</p> <p>Consider needs in relation to migrant workers (including different cultural needs) and women.</p>	Worker risk management	PR2, OS2, PS2	Company	During construction and ongoing during implementation	<p>Inspection program and register.  Weekly inspection and records.  Monthly reporting procedures established by EPC.</p>	
2.4	<p>Ensure that Project EPC Contractor has in place an appropriate workers' accommodation plan in line with EBRD/ IFC guidelines on Workers' Accommodation: Processes and Standards.</p> <p>Undertake an audit of the project-provided worker accommodation facilities prior to occupancy, followed by quarterly audits thereafter by the third-party external provider</p>	Worker risk management	PR2, OS2, PS2	Company, EPC	Prior to start of construction and ongoing during implementation	<p>Worker accommodation plan(s) in place satisfactory to lenders</p> <p>Regular monitoring and audits of worker accommodation by third party external provider.</p>	
PR3, OS3, PS3: Resource efficiency and pollution prevention							

3.1	Develop and implement an Air Quality Management Plan and a Noise Management Plan that include strategies to mitigate air and noise emissions during construction and operation. The plans should comply with regulations, involve experts and stakeholders, and be integrated into the overall management system for effective and consistent management throughout the company and its subsidiaries.	Worker health and safety	PR3, OS3, PS3	Company, EPC and O&M Contractor	Air Quality Management Plan and Noise Management in place prior to construction	Air Quality and Noise Management Plans in place and implemented	
3.2	During operations, undertake periodic dust inspections along site roads in the Southern Plot, given the proximity to local communities.	Air Quality - Dust	PR3, OS 3, PS3	Company	During operations.	Operations phase ESMP in place. Site inspection reports.	
3.3	Ensure if the project has potential noise impacts exceeding 35 dBA at sensitive receptors within 2,000 m of any turbines undertake a detailed model by suitability skilled and experienced specialists. This may require an updated baseline noise survey to comply with EHS guidelines. The assessment should be carried out across multiple wind speeds to ensure a robust assessment of the worst-case scenario.	Noise mitigation.	PR3, OS3, PS1, PS3 IFC Environmental, Health and Safety Guidelines for Wind Energy.	Company.	Prior to finalising project design.	Detailed noise model and impact assessment and mitigation included in E&S assessment.	
3.4	EPC and O&M contractors to develop a waste management plan and wastewater management plan meeting the requirements of Egyptian laws and regulations and EBRD's PR3, AfDB's OS3 and IFC PS3.  Ensure the Wastewater Management Plan includes measures for prevention of contamination of the environment from batching plant wastewater, should the Project establish an on-site plant during construction. Measures for appropriate disposal of contaminated equipment wash water should also be included.  The Project to confirm with the Ras Ghareb WWTP that the facility has sufficient capacity to receive the Project's wastewater, particularly during construction.	Waste management	PR3, OS3, PS3	Company, EPC and O&M Contractors	Engagement with the Ras Ghareb WWTP prior to start of construction.  Plans in place prior to construction and operation  Implemented during construction and operation	Waste and Wastewater Management Plan(s) in place and implemented Confirmation received that selected WWTP can accommodate Project wastewater.	
3.5	Selected waste disposal facilities for the Projects are licensed entities and conduct regular visits and reviews to verify their proper management and suitability for waste disposal.	Waste management	PR3, OS3, PS3	Company, EPC and O&M Contractors	Implemented prior to and during construction and operation	Report on facilities visited and inspected, validating their suitability.	
3.6	EPC and O&M contractors to develop a Water Management Plan throughout the construction and operation phases. This plan should include appropriate measures to minimize water consumption on-site, such as the utilization of grey water for activities like dust suppression.	Water use	PR3, OS3, PS3	Company	Plan in place prior to construction and operation  Implemented during construction and operation	Water Management Plan (s) in place and implemented	
3.7	Incorporate resource efficiency measures (pertaining to energy, fuels, water, materials etc) into the Project ESMP/management plans and include efficiency targets/Key Performance Indicators (KPIs).	Resource Efficiency	PR3, OS3, PS3	Company, EPC	Prior to start of construction	ESMP/management plans in place with resource efficiency measures and KPIs detailed.	
3.8	Project to engage with the proposed water suppliers as early as possible to discuss the water needs of the Project, to ensure the suppliers can accommodate the quantity required, in particular for concrete production. In the event that the Project does decide to use groundwater as a resource, local usage of treated groundwater should be fully assessed, to ensure the Project does not impact on the availability of the resource for local communities for crop irrigation.	Water Consumption	PR3, OS3, PS3	Company. EPC. Internal resources / budget.	Prior to start of construction.	Engagement with water suppliers – evidence of consultation records. Groundwater availability assessment carried out (as needed – should Project intend to use groundwater as a water supply)	
3.9	Provide an assessment of avoided GHG emissions (in tonnes of CO2e).  Ensure the EPC Contractor adopts measures to minimise GHG emissions during the construction phase, where possible.	GHG emissions	PR3, OS3, PS3	Company	Annually during operations	GHG emissions avoided quantified (to consider energy produced by project, national grid emission factors, etc.)  GHG reduction measures implemented	

3.10	Ensure the EPC Contractor and O&M Contractor develop and implement a Hazardous Materials Management Plan during the construction and operation phases.	Hazardous material management	PR3, OS3, PS3	Company	Prior to construction Implemented during construction and operation	Hazardous materials management plan	
PR4, OS4, PS4: Community health, safety, and security							
4.1	Develop HSE Management Plans and Operational Control Procedures that apply to all Project activities and operations affecting the safety and health of workers. This includes situations involving technical work that requires permits, artistic work that involves the use of personal protective equipment, as well as employees, non-employees (such as visitors, contractors, and trainees), and contractor activities in both routine and non-routine assignments. The procedure should also encompass a range of work instructions, including those pertaining to personal protective equipment (PPE) and work permits. The procedures should also take into account physical climate risks such as extreme heat, and include provisions to safeguard workers.	Worker health and safety	PR4, OS4, PS2	Company, EPC and O&M Contractors	Prior to construction Prior to operation	HSE Management Plans and Operational Control Procedures	
4.2	Company to ensure that the EPC and O&M Contractors develop an Occupational Health and Safety Plan during the construction and operation phases. H&S performance will be monitored against the Project Sponsor's ESMS and H&S performance targets.	Contractor H&S performance	PR4, OS4, PS2	Company, EPC and O&M Contractors	Prior to construction Prior to operation	Occupational Health and Safety Plans Contractor and subcontractor H&S performance overseen, monitored, and reported	
4.3	Establish a clinic on-site with the presence of a nurse and physician. Adequate arrangements must be made to have an ambulance available at the site as well. The clinic should be equipped with essential medical equipment, including an Automated External Defibrillator (AED), stretchers, backboards, immobilization equipment, a sphygmomanometer, an oxygen tank, a refrigerator, and any other necessary medical equipment. Additionally, the clinic should be stocked with antivenom to address snake bites.	Worker's safety	PR4, OS4, PS2	Company with EPC contractor support	Prior to construction	Fully equipped clinic and ambulance with a contract in place with a recognised medical organisation.	
4.4	If construction activities require a significant influx of works which may result in community and other impacts, 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, Project Sponsor will conduct an assessment of potential cumulative impacts of worker influx to the area and implement mitigation measures if necessary.	Worker influx management	PR4, OS4, PS2/4	Company	Plan in place prior to construction Implemented during construction Cumulative assessment conducted if required.	Workers' Influx Management Plan in place satisfactory to lenders	

4.5	<p>Develop a Flood Management Plan to set out protocols in the event of a flash flood. The plan must set out measures for the storage of materials, the location of site cabins and facilities, monitoring the potential occurrence of a flood and the safe evacuation of site operatives. In addition, the plan should include provisions for the management of residual risk associated with a breach failure of Dam 01, establishing a protocol for monitoring information on flood levels within the dam and provide early warnings for a potential spill.</p> <p>The following flood risk mitigating measures should also be considered in the project design: 1) position turbines away from mainstream flood paths to minimize flash flood risk; 2) use grouted riprap around turbines and maintain a minimum grading slope to allow water flow in the wadi direction, preventing water accumulation, 3) install four Irish Crossings on the North site and two on the South site where internal roads intersect main streams and 4) construct a new culvert and an upstream diversion channel at the North site where Wadi Hawashi intersects an asphalt road to prevent road overtopping.</p> <p>An Operation and Maintenance Plan should be established outlining provisions to maintain the integrity and function of the proposed road crossings and mitigation measures. The flood risk assessment should include a statement on the residual flood risks associated with a breach or failure of the structures.</p>	Flood risk management	PR4, OS4, PS1	Company	Prior to start of construction. Prior to start of operations.	Development of a Flood Management Plan. Development of an Operation and Maintenance Plan.	
4.6	<p>The Transportation and Access assessment should be updated in accordance with the requirements of the Institute of Environmental Management and Assessment (IEMA) Guidelines (considered good practice guidance). Further baseline information is required in order to fully ascertain potential impacts. A breakdown of the proposed roads to be utilised from the Port to the Project should be detailed including key local communities which the route passes through (and thereby identifying potentially sensitive receptors). Furthermore, information should be included on the capacity of each road (if available) or an estimate with accident and safety records also gathered to inform the impact assessment.</p>	Transport risk management	PR4, OS4, PS1	Company.	Prior to the start of construction.	Updated Transportation and Access Assessment compiled in accordance with good practice guidance.	
4.7	<p>EPC Contractor and O&amp;M Contractor to develop and implement a comprehensive Traffic and Road Safety Management Plan in compliance with Egyptian Traffic Rules and Regulations for the transport of project materials and workers. This plan should include a systematic vehicle inspection and maintenance program, establishment of transportation-related Key Performance Indicators (KPIs), a tracking system for traffic violations to identify areas for improvement, and a journey management plan that covers all aspects of road transport safety.</p> <p>Provide regular Defensive Driving Training for all drivers, maintain records of training, attendance, vehicle maintenance, and ensure that all measures are documented and accessible for review and auditing purposes.</p>	Transport risk management	PR4, OS4, PS4	Company, EPC, O&M contractor	Plan in place prior to construction Implemented during construction  During operation	Transport Management Plan(s) in place satisfactory to lenders  Defensive driving training programme and register to monitor records.	

4.8	<p>Develop a security management plan in accordance with the Voluntary Principles of Security and Human Rights, and the IFC Good Practise Handbook – Use of Security Forces, including procedures and code of conduct. The Plan will implement the Security strategy outlined in the ESMS Manual. Security personnel, including Bedouins, should be trained to avoid use of excessive force, and vetting for past offences should be undertaken. Avoidance of armed security at all times.</p> <p>Ensure any findings from the Security Risk Assessment to be carried out prior to operations are addressed with appropriate mitigation to be incorporated in the Operations phase Security Management Plan.</p>	Security risk management	PR4, OS4, PS4	Company	Prior to start of construction Prior to start of operations	Security management plan in place satisfactory to lenders	
4.9	<p>Develop a Community Health &amp; Safety Plan to include detailed arrangements for managing site access during construction and operation, including fencing / physical barriers, access controls, warning signage and monitoring of security (patrols, etc.). (This is particularly relevant to the Southern Plot, given the proximity of the site to the Wadi Dara community.)</p>	Public access risks.	PR4, OS4, PS4	Company	Prior to start of construction.	Approved community Health and Safety Management plan in place.	
<b>PR5, OS5, PS5: Land acquisition and involuntary resettlement</b>							
5.1	<p>In order to protect the Project Sponsors, the Project and its investors/lenders from future potential claims or reputational damage, seek a legal opinion on the legality of the land transfers, along with potential legal risks and mitigation measures.</p>	Land acquisition risks	PR5, OS5, PS5	Company	Prior to construction	Legal opinion shared with lenders	
<b>PR6, OS6, PS6: Biodiversity conservation and sustainable management of living natural resources</b>							
6.1	<p>Update and finalise the Biodiversity Action Plan (BAP) detailing the mitigation approach for the project, and associated overhead transmission lines, to ensure No Net Loss of Priority Biodiversity Features and Net Gain for Critical Habitat trigger species (southern plot which is located within the Important Bird Area (IBA) and Critical Habitat).</p> <p>The BAP will be developed and updated by qualified specialists experienced in the development of BAPs to IFI standards. This will be done in line with the wider BAP initiatives for the Gulf of Suez region. The BAP will be consulted upon with key stakeholders (e.g., government authorities, Birdlife representatives) and costed for at least the first five years of the project. The BAPs are expected to include offset and conservation actions within the Gulf of Suez and outside of Egypt. The BAP will be informed by the CHA and CEA thresholds. The BAP will include a monitoring component as well as a management of change approach.</p>	Biodiversity Risk Management	PR6, OS6, PS6	Company and specialist consultants and contractors	BAP finalised during first year of construction. Implemented during life of Project.	BAP costed, budget confirmed, implemented, monitored and reported.  BAP updated as necessary.	

6.2	<p>OHTL: In stretches where the OHTL runs parallel to a preexisting OHTL, the towers of the new line should be placed in an alternating pattern, to the extent possible and subject to further analysis, with those of the existing line (staggered towers), rather than directly opposite each other.</p> <p>Bird Flight Diverters (BFD) are to be installed every 10 m (or equivalent depending on design changes) along the entire length of the OHTL on the shield wire, as per the ESIA. All BFDs will be dynamic (i.e. move in the wind) to increase visibility. BFDs installed within the IBA and within 4 km of the dam in Plot 1 will include models that glow or light up at night.</p> <p>The installation of BFDs will be supervised by the Sponsor's Wind and Wildlife Expert .</p> <p>These mitigation measures will be included in the permitting ESIA as a requirement for the Project.</p>	Biodiversity Risk Management	PR6, OS6, PS6	Company with EETC	Four months prior to start of construction and during construction	<p>Management plans and procedures in place and implemented and acceptable by the lenders.</p> <p>Reports to the lenders and data available.</p>	
6.3	<p>Implement mitigation actions included in the project Environmental and Social Impact Assessments (ESIA) to reduce the significance of habitat loss, fragmentation, and degradation during the construction phase.</p> <ul style="list-style-type: none"> <li>All site workers will undertake an induction before working on site including a comprehensive biodiversity element where the baseline ecological value and sensitivity of the site will be discussed. All hunting, gathering, poaching and disturbances of fauna and flora will be prohibited</li> <li>Prior to construction working areas will be clearly demarked so that the workers fully understand the working area.</li> <li>On completion of phased construction works the EPC Contractor will be responsible for habitat rehabilitation works in all areas that have been subject to temporary disturbance</li> <li>The BAP and BMP will detail the procedures for the enhancement of an area to ensure no net loss of natural habitat as a result of construction works.</li> </ul>	Biodiversity Risk Management	PR6, OS6, PS6	Company and contractors	Four months prior to start of construction and during construction	<p>Management plans and procedures in place and implemented and acceptable by the lenders.</p> <p>Biodiversity reporting to the lenders and data available.</p>	
6.4	<p>Implement mitigation actions included in the ESIA's to mitigate potential introduction on non-native plant species.</p>	Biodiversity Risk Management	PR6, OS6, PS6	Company	Four months prior to start of construction and during construction	<p>Management plans and procedures in place and implemented and acceptable by the lenders.</p> <p>Biodiversity reporting to the lenders and data available.</p>	
6.5	<p>Mitigation actions included in the ESIA's to mitigate potential vehicle collisions must be implemented.</p> <ul style="list-style-type: none"> <li>Speed limits of 20 kph are to be enforced by the EPC contractor</li> <li>Regular signage will be installed along the site access roads and internal roads to inform of speed limits</li> <li>A ban of driving at night and off-road at all times</li> </ul>	Biodiversity Risk Management	PR6, OS6, PS6	Company	Four months prior to start of construction and during construction	<p>Management plans and procedures in place and implemented and acceptable by the lenders.</p> <p>Biodiversity reporting to the lenders and data available.</p>	

6.6	<p>Mitigation actions included in the ESIA's to ensure No Net Loss for the Egyptian Spiny-tailed Lizard must be detailed in the Project BAP and/or BMP and implemented.</p> <p>Detailed design for the WPP layout will take into account the results of the pre-construction surveys directed at the Egyptian Spiny-tailed Lizard, and WPP infrastructure will be sited to avoid the identified burrows. Where this is not possible, or where fresh burrows are found at the start of clearance works, these burrows will be excavated by hand, and the animals captured and translocated following the procedure detailed in the ESIA. This procedure also applies to the OHTL.</p> <p>Prior to work in an area containing Egyptian Spiny-tailed Lizard burrows, any remaining burrows within 50 m of proposed works will be re-checked using an endoscope. If empty, the burrow will be destroyed. If any animal is found, the burrow will be dug carefully by hand and the animal captured and placed in a secure box before taking to a cool location ready for translocation to the receptor site. If areas suitable for translocation exist within the project area, these will be prioritized.</p>	Biodiversity Risk Management	PR6, OS6, PS6	Company and biodiversity contractors	Four months prior to start of construction and during construction	<p>BAP and BMP in place, satisfactory to the lenders.</p> <p>Biodiversity reporting to the lenders and data available.</p>	
6.7	<p>Ensure that pre-construction biodiversity surveys are undertaken prior to the start of construction of the WPP and OHTL to ensure that impacts to terrestrial biodiversity, including the Egyptian Spiny-tailed Lizard are avoided. A specialized ecologist will be hired to conduct the surveys and develop the Spiny-tailed lizard related actions. Implementation of species/habitat protection measures during construction will be supervised by EEAA's Environmental Protection Sector.</p> <p>Pre-construction surveys will also target birds that are potentially breeding in the area, aiming to find nests that could be at risk from construction related impacts. Surveys will be conducted by an appropriately qualified ecologist following the methods detailed in the ESIA's. Where nests are found they will be recorded, and their locations mapped. Depending on the species and its conservation status, works exclusion zones will be defined and agreed with the qualified project ecologist.</p>	Biodiversity impact management	PR6, OS6, PS6	Company and biodiversity contractors	Surveys prior to construction and mitigation actions during construction	<p>Surveys undertaken.</p> <p>Biodiversity reporting to the lenders and data available.</p>	

6.8	<p>The following actions, listed in the ESIA's will be implemented during the project operation phase:</p> <ul style="list-style-type: none"> <li>• Migratory Soaring Bird monitoring during Spring (late February to mid-May) and Autumn (mid-August to mid-November). During these periods, monitoring must take place continuously on a daily basis with full site coverage using vantage points and experienced surveyors.</li> <li>• Shutdown on demand following the ATMP protocol (a detailed plan must be concluded in collaboration with RCREEE, including shutdown criteria, applicable period during spring and autumn migration, team requirements ensuring a biodiversity specialist is in charge of shutdowns, equipment requirements, radar use and protocols, shutdown protocol, communications protocol)</li> <li>• Fatality monitoring (wind turbines and Project associated OHTL), including number, location and suspected cause of death of bird fatalities, bias correction trials and calculating fatality rates, following Good International Industry Practice</li> <li>• Monitoring of the OHTL BFDs every six months prior to the spring and autumn migration seasons. Replacement of the damaged or defective units before the start of the season.</li> <li>• Adaptive management taking into consideration the fatality thresholds presented in the Cumulative Effects Assessment (based on Population Biological Removal model) must be implemented. If fatality thresholds are exceeded by either the wind turbines or the transmission lines, offsets must be considered in order to achieve No Net Loss and Net gain for priority species and critical habitat species respectively (described in BAP – note that net gain is required for critical habitat species in the IBA even if thresholds are not exceeded).</li> <li>• Maintain a 2 km setback distance from the Dam area (northern plot) which is a source of attraction for migratory birds, particularly during Spring.</li> <li>• Maintain a 2 km setback distance from Wadi Dara (southern plot) which is a source of attraction for migratory birds.</li> </ul>	Migratory soaring bird collision risk management	PR6, OS6, PS6	Company and contractors	Six months prior to start of operations and implemented throughout the life of the project.	Operations phase BMP, acceptable to lenders, in place and implemented. Biodiversity reporting to the lenders and data available.	
6.9	<p>Ensure the implementation of shutdown on demand during spring and autumn migratory periods according to the protocol defined under 6.8. RCREEE is the designated partner for implementing the ATMP. The protocol must incorporate learnings from other projects in the region, such as increasing the number of vantage points to cover every turbine in the wind farm, ensure appropriate coverage of full daylight hours and ensure bi-annual (at the end of each season) review of fatality results to propose adaptive management if needed. Adaptive management may include adjusting dates for start/end date of each monitoring season, adjust number and location of vantage points.</p>	Migratory soaring bird collision risk management	PR6, OS6, PS6	Company and contractors	Procedures in place six months prior to start of operation. Implemented during operation	Procedures in place and implemented and acceptable to the lenders. Reports to the lenders and data available.	

6.10	<p>Ensure that post-construction fatality monitoring according to the protocol described in recent guidance developed by the IFC, EBRD and other lenders (IFC et al 2023<sup>1</sup>) both in spring and autumn spring seasons are undertaken (WPP and OHTL). This includes:</p> <ul style="list-style-type: none"> <li>• Carcass search</li> <li>• Bias correction trials for scavenger removal and searcher efficiency</li> <li>• A wind and wildlife expert will be hired to develop fatality rate estimates with statistical correction factors and implement this work in the field.</li> </ul> <p>Develop reporting procedures for the WPP and associated OHTL for the following:</p> <ul style="list-style-type: none"> <li>• Reporting fatalities of priority bird species to authorities and lenders in a timely manner (within a week), including a review of the incident by the responsible wind and wildlife expert</li> <li>• Bi-annual reports to lenders detailing the results of soaring bird migration, shutdown on demand incidents (including near-misses), damaged BFDs and energy production losses due to shut-down on demand, fatalities</li> <li>• Share survey and fatality data with all the relevant stakeholders.</li> <li>• Implement independent monitoring/audit of post-construction fatality monitoring procedures</li> </ul>	Bird fatality monitoring	PR6, OS6, PS6	Company and biodiversity contractors	Six months prior to the start of operation and during operation	Fatality Monitoring procedures in place and implemented (acceptable to the lenders). Reports to the lenders and data available.	
6.11	Ensure that an organisational structure is in place, including WPP personnel, for the operational phase able to support the implementation of the mitigation and monitoring measures required, including a Biodiversity Manager and a Wind and Wildlife Expert/Project Ecologist.	Biodiversity risk management resources	PR6, OS6, PS6	Company and biodiversity contractors	Structure presented six months prior to operation	Organisation structure presented	
6.12	Liaise with relevant national authorities, organisations and RCREE to ensure that appropriate resources are available to deliver the ATMP, 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, including on-the-job training (additional to the trained observers) preferentially resorting to people from the neighbouring town of Ras Ghareb.	Biodiversity risk management resources	PR6, OS6, PS6	Company and biodiversity contractors	Prior to operation and during life of the project	Appropriate evidence provided in Company initiatives and activities training programme for local bird observers.	
6.13	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 resources	PR6, OS6, PS6	Company and biodiversity contractors	During life of the project	Evidence of collaboration	
6.14	Develop and implement a Carcass Management Plan to ensure that the project area and its surroundings is free from carcasses that attract soaring birds. This should be maintained for the lifespan of the Project. Develop reporting procedures to evaluate the efficacy of the plan.	Biodiversity risk management resources	PR6, OS6, PS6	Company and biodiversity contractors	During life of the project	Carcass Management Plan in place and implemented (acceptable to the lenders) Report to the lenders and data available.	
6.15	Support the independent expert review, including by biodiversity focussed civil society organisation experts, of approaches, protocols, procedures, criteria and resulting data related to the Project's migratory soaring bird monitoring, the ATMP and post construction fatality monitoring. This would include the disclosure of relevant information and data to support such reviews as well as active engagement with relevant stakeholders.	Biodiversity risk management	PR6, OS6, PS6	Company and biodiversity contractors	During life of the project	Support of independent expert review of approaches, protocols, procedures, criteria and resulting data related to the Project's migratory soaring bird monitoring, the ATMP and post construction fatality monitoring, including the disclosure of relevant information and data to support such reviews as well as active engagement with relevant stakeholders.	

<sup>1</sup> <https://www.ifc.org/en/insights-reports/2023/bird-bat-fatality-monitoring-onshore-wind-energy-facilities>

PR8, OS8, PS8: Cultural heritage							
8.1	EPC Contractor responsible for civil works to oversee the preparation and implementation of a Chance Finds Procedure for the project. This procedure should be designed to address any potential discoveries of new cultural heritage during the construction phase and ensure appropriate measures are taken in response.	Cultural heritage risk management	PR8, OS8, PS8	Company	Prior to and during construction of any project	Chance finds procedure	
8.2	Incorporate cultural heritage in the SEP to account for any unforeseen impacts throughout the lifetime of the Project.	Cultural heritage risk management	PR8, OS8, PS8	Company.	Prior to construction.	Coverage of cultural heritage -specific consultations in updated SEP.	8.2
PR10, OS10, PS1: Information disclosure and stakeholder engagement							
10.1	Project Sponsor will implement and maintain the Project Stakeholder Engagement Plan (SEP), 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, OS10, PS1	Company	During all project phases	Stakeholder Engagement Plan and public grievance mechanism implemented and records maintained.	
10.2	Document the disclosure period including the implementation of the SEP, consultation with stakeholders and responses provided in a ESIA consultation report. This will include engagement undertaken with organisations like Birdlife International and Nature Conservation Egypt as well as Government authorities. The Consultant report will be disclosed.	Stakeholder engagement and information disclosure	PR10, OS10, PS1	Company	At end of 60 day ESIA disclosure period	Consultant report produced and acceptable to the Lenders.	