Nukus 200 MW Phase 2 Wind Farm

Republic of Uzbekistan

Environmental & Social Impact Assessment

Volume 3: Environmental & Social Management Plan

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CONTENTS

LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
AOI	Area of Influence
CESMP	Construction Environmental and Social Management Plan
DFI	Development Finance Institution
EPC	Engineering, Procurement and Construction
ESAP	Environmental & Social Action Plan
ESIA	Environmental & Social Impact Assessment
ESMP	Environmental & Social Management Plan
ESMS	Environmental and Social Management System
FMO	Netherlands Development Finance Company
GBVH	Gender Based Violence & Harassment
HSSE	Health, Safety Security and Environment
IFC	International Finance Corporation
LALRP	Land Acquisition & Livelihood Restoration Plan
LNTP	Limited Notice to Proceed
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change
NTP	Notice to Proceed
O&M	Operations & Maintenance
OESMP	Operation Environmental and Social Management Plan
PS	Performance Standard
SEA	Sexual Exploitation & Abuse
SEE	State Ecology Expertise
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
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1 INTRODUCTION

This document presents the Environmental & Social Management Plan (ESMP), that follows on from the ESIA developed for the Nukus 200 MW Phase 2 Wind Farm Project ("the Project").

This ESMP has been informed by the outcomes of the ESIA (Volume 2) and has been developed to establish structures for the management of Environmental and Social risks, impacts, opportunities and compliance associated with the construction and operational phases of the Project. The Framework is intended to outline systematic structures and management programmes that will comprise the respective construction, commissioning and operational phase Environmental and Social Management Systems (ESMS).

In order to implement the mitigation and management measures established in the ESIA (Volume 2), specific management programmes will be developed to incorporate these mechanisms, as well as the requirements of the national environmental regulatory authority, the Ministry of Ecology, Environmental Protection and Climate Change (MEEPCC) and the Project Lenders, notably Asian Development Bank (ADB), the Asian Infrastructure Investment Bank (AIIB) and Netherlands Development Finance Company (FMO). Such documented information will be in the form of a broader project specific ESMS implemented by the applicable project parties relevant to their role in the Project. This includes certain high-level policies and oversight by the Project Company, with more specific in-depth ESMS documents including the Construction Environmental and Social Management Plan (CESMP) (including a specific LNTP Phase CESMP) and Operation Environmental and Social Management Plan (OESMP) (and other complimentary plans/procedures) by the EPC Contractor (POWERCHINA – SINOHYDRO) and NOMAC – ACWA Power's wholly owned O&M Company; to be developed prior to the commencement of construction, commissioning and operations respectively.

This ESMP has also been prepared to ensure alignment with applicable elements of the established ACWA Power Project Company E&S Policy template and related ESMS Implementation Manual, which is intended to ensure consistent and structured E&S project management between ACWA Power projects.

2 REQUIREMENTS FOR PROJECT E&S MANAGEMENT

The following applicable requirements relate to the need for the Project to implement formal or structured ESMS, or related policies, management programmes and or other E&S management processes.

These requirements are applicable during all stages of project implementation, following planning and initial permitting (i.e. construction, commissioning, operations, decommissioning and closure).

2.1 National Level

The regulatory body in Uzbekistan responsible for the regulation of the activities within the country that relate to ecology, environmental protection and use of natural resources is the MEEPCC.

The main Environmental Protection Law in Uzbekistan is the Law on Nature Protection, 1992 as amended in 2021. This law provides legal, economic, and organisational basis for the conservation of the environment and the rational use of natural resources. Article 25 of this law states that the State Environmental Expertise (SEE) is a mandatory measure for environmental protection, preceded to decision making process and the role of the SEE includes the review and approval of National EIA submissions (under MEEPCC). In addition, the law prohibits the implementation of any Project without approval from MEEPCC.

In the conclusions for the Nukus 200 MW National EIA Stage I Preliminary Statement of Environmental Impact, it is stated that there is a requirement for the implementation of a Project specific Environmental Management Plan and the Environmental Monitoring Plan.

2.2 Lenders Requirements

ACWA Power is seeking project finance from Development Financial Institutions (DFIs) who have their own bespoke environmental & social policies/standards that relate to their investments, including project finance transactions. This includes ADB, AIIB and FMO who are expected to be involved in the financing. Each of these lenders place certain requirements on their Clients in terms of a risk-based approach to environmental & social management, as outlined below.

2.2.1 ADB

ADB Safeguard Requirements 1: Environment outlines the requirements that clients are required to meet when delivering environmental safeguards for projects supported by ADB.

Under this Safeguard, projects are required to develop a Environmental Management Plan (EMP) and will include the 'proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators'.

ADB Safeguard 2: Outlines the requirements that clients are required to meet in delivering involuntary resettlement safeguards to projects supported by ADB. This includes enhancement and/or restoration of the livelihoods of all displaced persons in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups; undertake meaningful stakeholder consultations and information disclosure; establishing a grievance mechanism; and implementation of the resettlement plan and monitoring.

The Project will comply with ADB Social Protection Strategy (2001) which is defined as the set of policies and programs designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption/loss of income.

The Social Protection Strategy spells out the scope of social protection and commitment of the ADB to develop priority interventions in five major elements:

- Labour market policies & programs designed to generate employment, improve working conditions & promote the efficient operations;
- Social insurance programs to cushion the risks associated with unemployment, ill health, disability, work-related injury & old age;
- Social assistance and welfare service programs for the vulnerable groups with inadequate means of support, including single mothers, the homeless, or physical or mentally challenged people;
- Micro and area-based schemes to address vulnerability at the community level, including micro insurance, agricultural insurance, social funds and programs to manage natural disasters; and
- Child protection to ensure the healthy and productive development of children.

At the Project level the Strategy will be applicable in the following areas:

- Compliance with internationally recognised labour standards and requirements;
- Compliance with ILO core labour standards; and
- Ensure that appropriate actions are implemented to ensure ADB financed procurement of goods and services, contractors, sub-contractors etc are in compliance with core labour standards.

2.2.2 AIIB

AIIB recognizes that E&S sustainability is a fundamental aspect of achieving outcomes consistent with its mandate to support infrastructure development and enhance interconnectivity in Asia. The objective of AIIB's ESP is to facilitate achievement of these development outcomes, through a system that integrates sound E&S management into Projects.

ESS1 aims to ensure the environmental and social soundness and sustainability of Projects and to support the integration of environmental and social considerations into the Project decision-making process and implementation. ESS 1 is applicable if the Project is likely to have adverse environmental risks and impacts or social risks and impacts (or both).

The scope of the environmental and social assessment and management measures are proportional to the risks and impacts of the Project. ESS1 provides for both quality environmental and social assessment and management of risks and impacts through effective mitigation and monitoring measures during the course of Project implementation. The ESS1 defines the detailed requirements of the environmental and social assessment to be carried out for any project to be financed by the Bank.

3 ENVIRONMENTAL & SOCIAL MANAGEMENT SYSTEM

The Project's ESMS will provide a systematic structure and approach to enable the effective implementation and management of environmental & social risks, impacts, opportunities and related compliance.

Effective management of environmental & social issues will include the following fundamental components as part of any robust ESMS:

- Project specific policies related to the environmental and social considerations (including labour, HR and external stakeholders & affected communities).
- Project-based E&S Objectives, Targets & Programme.
- Applicable environmental & social legal requirements and other compliance obligations (such as those required by lenders);
- Environmental & Social aspects and potential impacts, as early as possible for construction, commissioning and operation phase planning, including the incorporation of environmental and social considerations into staffing requirements, process plans, programming, work orders, required authorisations, and site layout;
- Environmental & Social professionals, who have the experience, competence, and training necessary to assess and manage environmental impacts and risks, and carry out specialised environmental & social management functions including the preparation of Project or activity specific plans and procedures that incorporate the technical requirements presented in this document;
- Prioritisation of management programmes/ strategies with the objective of achieving an overall reduction of risk to human wellbeing and the environment, focusing on the prevention of irreversible and / or significant impacts;
- Favouring strategies (where possible) that eliminate the cause of the impact at its source, for example, by selecting less hazardous materials or processes that avoid the need for environmental controls;
- When impact avoidance is not feasible, incorporating controls to reduce or minimise the possibility and/or magnitude of undesired consequences, for example, with the application of pollution controls to reduce the levels of emitted contaminants;
- Preparing workers, informing and co-operating with nearby communities and relevant stakeholders to respond to emergencies, accidents, including providing technical and financial resources to effectively and safely control such events, and restoring workplace and community environments; and

- Improving environmental performance (i.e. for continual improvement) through a combination of ongoing monitoring of facility performance and effective accountability.

Initial implementation of the ESMS will focus on setting and reviewing requirements, determining custodianship within the project team, identifying budgets, establishing target ranges for performance and establishing appropriate data gathering techniques and controls.

Performance ranges will be refined on a regular basis as more data becomes available, in turn enabling more accurate strategy development and benchmarking. As such, the ESMS documents will be treated as living documents, to be updated within a continuous process of improvement.

An outline implementation process for ESMS is illustrated in the figure below.

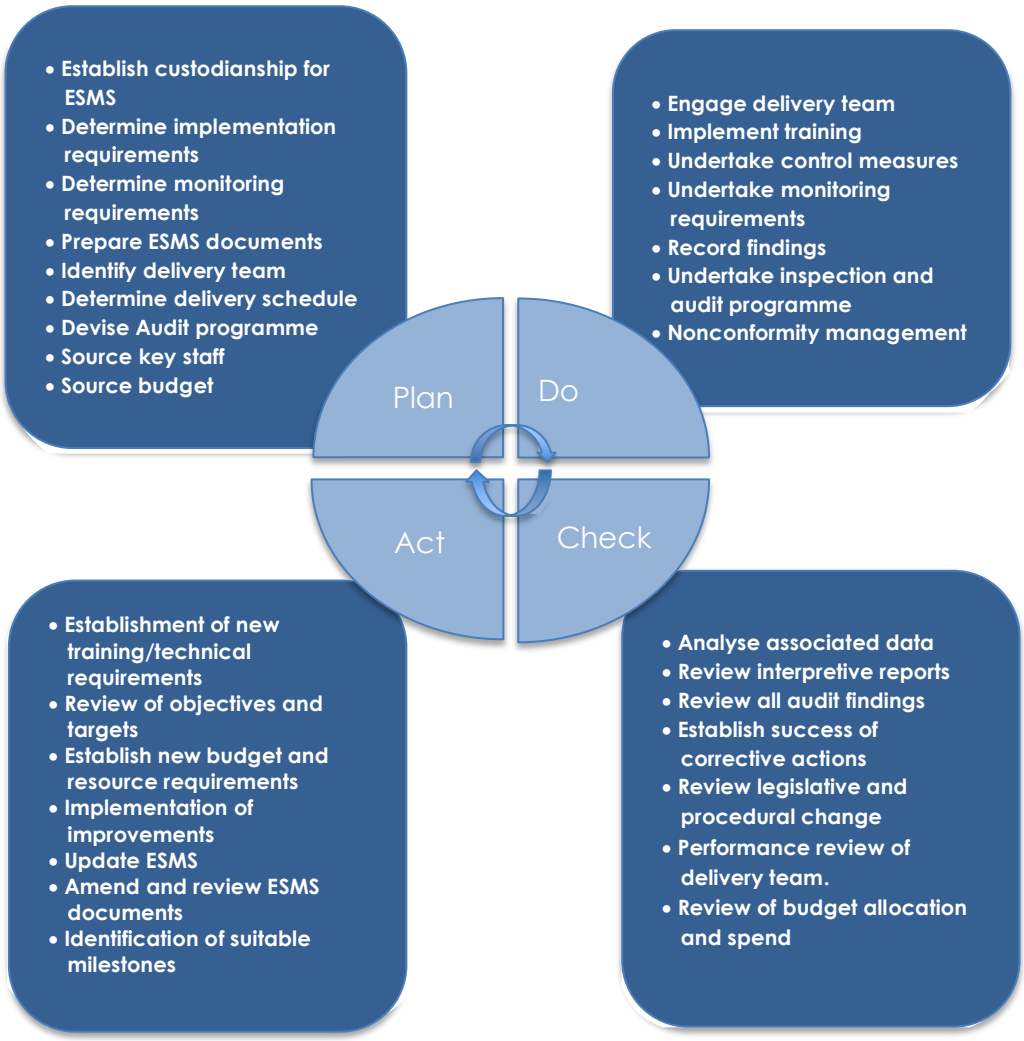


Figure 3-1 Implementation Process

3.1 ESMS Scope

The ESMS will be developed for implementation across all project phases (i.e. LNTP, construction, operations and ultimate decommissioning) and will be scaled to the risks and impacts of that phase.

The Project scope of the ESMS will include the following:

- **Construction Phase**
  - Construction works at all Project facilities: wind farm, BESS, Switching Station tie-in, Internal OHTL, OHTL to the Beruniy Substation, Beruniy Substation tie-in.
  - Temporary site facilities and workers accommodation area.
- **Operations Phase**
  - O&M activities at the Wind Farm, internal OHTL, tie in to the site switching station and site administration area.

The scope will include:

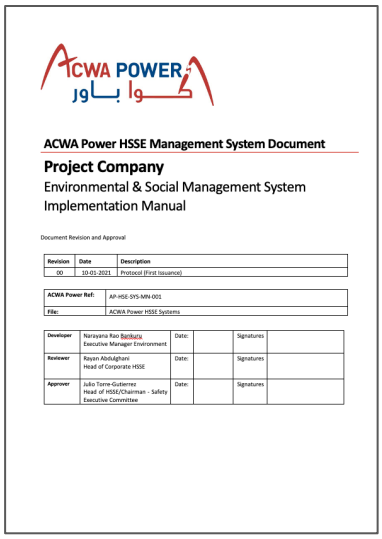
- Physical elements of the project to set the boundaries of the ESMS scope (i.e. this will include the projects physical footprint and applicable associated facilities;
- Project related activities being undertaken (and relevant to that phase of the project e.g. for construction, commissioning, operation, decommissioning and if necessary, post closure);
- Compliance with applicable national regulation (applicable standards and conditions of the National EIA conclusions), lender requirements and loan covenants (including from the ESAP);
- Detailed mitigation and management measures required following construction, commissioning and operational impacts identified from the ESIA;
- Roles and responsibilities for appropriate management organisational units;
- Key risks and management requirements related to primary supply chains (which can reasonably be managed), and;
- Requirements for monitoring and reporting, including measures for inspection, audit, review and preventative action.

3.2 Project E&S Management Structures

3.2.1 Project Company E&S Policy

ACWA Power implements a template E&S Policy structure for Project Companies to ensure consistent policy development across its assets. Please refer to the 'E&S Policy' chapter for further details.

3.2.2 Project Company: ESMS Implementation Manual



ACWA Power HSSE Management System Document

Project Company

Environmental & Social Management System Implementation Manual

Document Revision and Approval

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Reviewer	Rayan Abdulghani Head of Corporate HSSE	Date:		Signatures	
Approver	Julio Torre-Gutierrez Head of HSSE/Chairman - Safety Executive Committee	Date:		Signatures	

Besides the aforementioned E&S Policy template, the Project Company will align its E&S management with the 'Project Company - Environmental and Social Management System: Implementation Manual'. This manual is a corporate document issued to all Project Companies.

The purpose of the document is to provide guidelines to ensure that key elements related to E&S management are implemented consistently by established ACWA Power Project Companies at the projects that are under ACWA Power ownership or partnership.

3.3 Development of LNTP and Construction Phase ESMS

As the overall accountable party for E&S compliance and management, the Project Company, '"ACWA Power Beruniy" Wind FE LLC' will develop and implement the project specific E&S Policy. Further, the Project Company will be responsible for certain other key documents and processes during LNTP and construction, including the implementation of the Land Acquisition & Livelihood Restoration Plan (LALRP) and Stakeholder Engagement Plan (SEP).

Separate to the above and as the contractually responsible party for project delivery during the LNTP and construction phases, the majority of the construction phase ESMS will be developed and implemented by the Engineering, Procurement and Construction (EPC) Contractor, SINOHYDRO (part of POWERCHINA). This is contractually captured in the EPC Contract. The EPC Contractor's ESMS will be required to fall under the Project Company's E&S Policy requirements.

The EPC Contractor's ESMS will ensure coverage of the potential environmental and social risks, impacts, opportunities and related compliance associated that fall under the scope of the Project's LNTP and construction phases (including potential impacts related to sub-contractor activities and key E&S risks in supply chains that can be influenced). This also includes applicable commissioning activities and post-construction activities such as site demobilisation, restoration of land used during construction etc.

3.4 Development of Operational Phase ESMS

The same E&S Policy of the Project Company will be implemented during operations as it was for construction; but maybe subject to certain updates due to the specific stage of the Project, or updates to regulation and other compliance obligations that may have changed. It is expected that the Project Company, as the owner of the Project will also be responsible for the implementation of the majority of the SEP obligations, particularly with government and community stakeholders; although some of this may be delegated to NOMAC, the O&M Company.

The majority of the operational phase ESMS will be developed and implemented by the O&M Company and will fall under the E&S Policy established by the Project Company. This will be contractually captured in the O&M Contract.

The O&M Company's ESMS will ensure coverage of the potential environmental and social risks, impacts, opportunities and related compliance obligations that fall under the scope of the Project's operational phase (including potential impacts related to sub-contractors and/or other suppliers that can be influenced).

3.5 Decommissioning Phase

At this stage it's unclear on the respective parties that will be involved in the Project at the time of decommissioning. Hence, it is expected that at that time, the owner of the Project will ensure development of an ESMS scaled to the risks, impact and required compliance obligations of the decommission stage activities.

4 E&S POLICY

The Project Company will develop clear statements that define policy, commitments and related objectives with regard to environmental and social issues/compliance and management which are project specific.

4.1 Project Company E&S Policy

ACWA Power has a template E&S Policy structure for Project Companies to ensure consistent policy development across its assets. It is designed to align with the overarching ACWA Power corporate level policies, whilst ensuring that legal and lender requirements are captured.

The Project Company's E&S Policy will be prepared based on this template, which includes commitments to:

- Comply with relevant environmental & social, legal, contractual, financing requirements and obligations. Including applicable international treaties and protocols, national legislation, permitting conditions and lenders requirements.
- Implement a risk-based ESMS that aligns with good international practices and conforms with the IFC Performance Standards (as a minimum) and other applicable lender requirements for ESMS.
- Implement measures to manage and reduce natural resource consumption, whilst implementing specified management measures to prevent pollution that are consistent with assessment documentation, permitting and lender conditions.
- Engage with employees and stakeholders on environmental & social issues and implement a robust Grievance Redress Mechanism process for project staff and third-party stakeholders.
- Uphold, respect, protect and fulfil human rights in accordance with the International Bill of Human Rights and any other instruments of international human rights such as those relating to the rights of women and children.
- Employ staff on the basis of equal opportunities and non-discrimination, whilst adhering to the ILO Conventions stated in IFC PS2 for worker management.
- Ensure staff receive environmental & social information, training and instructions on environmental & social leadership applicable to their activities and duties.
- Not accept or tolerate GBVH/SEA/SH in any form.
- Establish processes to identify, investigate and remedy instances of GBVH/SEA/SH. whilst encouraging reporting of such instances, providing support to those involved and ensuring their dignity, respect and confidentiality.
- Set indicators to promote and assure environmental & social performance of key supply chains and service providers.

- Implement systematic feedback systems to monitor, audit and report on environmental & social management and performance.
- Annually review this environmental & social policy statement and set performance and management targets to enable continual improvement within the ESMS to be achieved.

The policy will be signed by the top management of the Project Company, displayed on site and will be circulated to Project contractors for their compliance.

4.2 Contracted Parties: E&S Policies

The EPC Contractor and O&M Company may also develop E&S Policies, however, the Project Company's overarching project specific E&S policy will prevail.

5 IDENTIFICATION OF LEGAL AND COMPLIANCE OBLIGATIONS

5.1 Identification of Legal Requirements

During the development of the ESMS, the applicable environmental and social legal requirements should be identified and documented, including:

- Applicable Uzbekistan Environmental and Social Regulation and Standards; and
- Applicable International Treaties and Conventions signed and/or ratified by Uzbekistan.

Please refer to **Annex B** for the applicable legal framework including national requirements.

5.2 Identification of ESIA Requirements

Volume 2 of the ESIA has developed Project and/or site-specific mitigation, management & monitoring measures that must be incorporated into the respective construction, commissioning and operational phase of the project.

Please refer to the below sections for the extracted mitigation and monitoring measures from the ESIA.

5.3 Identification of Requirements from the Statutory Authority

The 'conclusions' (or other conditional requirements) issued by the SEE (under MEEPCC) to the Project's National EIA must be reviewed to ensure that all construction (from the Stage 1 positive conclusions) and operational (at stage 3) related conditions established are managed accordingly.

Please refer to **Annex A** for the National EIA positive conclusions issued by SEE (under MEEPCC).

Non-compliance with the conclusions may result in a breach of legislation and permitting requirements. The conclusions shall be maintained as part of the ESMS.

5.4 Identification of Requirements from the Project Lenders

5.4.1 Lender E&S Standards

As outlined above, ACWA Power is seeking project finance from Development Financial Institutions (DFIs) who have their own bespoke environmental & social policies/standards that

relate to their investments, including project finance transactions. This includes ADB, AIIB and FMO who are expected to be involved in the financing.

Please refer to **Annex B** for the applicable legal framework including lenders requirements.

5.4.2 Environmental & Social Action Plan

Following the E&S due diligence process, the lenders (and their advisors) will establish an E&S 'Action Plan' (ESAP) that identifies Environmental and Social requirements for the project commensurate with or supplementary to the ESIA. Requirements of the action plan will be the E&S covenant of the Project's loan agreement.

During the development of the Project's ESMS the ESAP for the Project must be reviewed to ensure that all related conditions are included for compliance management. It is highlighted that non-compliance with the lenders' requirements could impact financial disbursement and other factors.

6 IDENTIFICATION OF RISKS, IMPACTS & OPPORTUNITIES

One of the principal stages in the development of the Project's ESMS will be the development of a Project specific aspects/risks register linking to potential environmental or social impacts associated with the relevant activities being undertaken at that phase of the project.

Once environmental & social aspects and associated risks have been identified and documented (i.e. specifically in accordance with the required construction methods statements or operational activities), associated controls should be developed that are commensurate to the level of anticipated severity, likelihood and any statutory or lender requirements.

The identification of risks and impacts is expected to align with the items identified in the ESIA, but may include additional items that were unforeseen or related to specific working methods; which may vary from the understanding at the time of ESIA preparation.

Hence, when the applicable project teams are identifying the aspects/risks and associated environmental or social impacts the following will be taken into account:

- Risks, impacts and opportunities linked to the Project activities;
- Change, including planned or new development and or new/modified activities;
- Abnormal conditions and reasonably foreseeable emergency situations;
- Project timescales and potential impacts associated with seasonality;
- Stakeholder perception;
- Compliance obligations;
- Risks inherent in the supply chain in addition to those on-site; and
- Linkages with the Project's Health and Safety Management System.

The identification of aspects/risks and impacts will be documented, linked to associated proposed controls and updated as and when Project or environmental & social circumstances change.

7 MITIGATION & MONITORING REQUIREMENTS

Mitigation measures are a key component of E&S Management and are designed to minimise, avoid, or offset potential negative environmental and social impacts arising from the Project's activities.

The measures listed below are referenced from the ESIA Volume 2, following the assessment of impacts and will require implementation in practice by the Project parties responsible for construction and operations respectively.

Monitoring is required during construction, commissioning and operation to evaluate the effectiveness of the adopted mitigation approaches and to monitor whether the project is in compliance with the applicable national regulations/standards and applicable lender requirements.

7.1 Construction Phase Mitigation & Monitoring

7.1.1 Air Quality

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Construction Dust	Human receptors within 350 m of the boundary of the site, and within 50 m of the route used by construction vehicles on public highway, up to 500 m from the project site entrance.	• Dust generating activities (blasting, land grading, excavations, etc.) and movement of uncovered waste/materials should be conducted during periods of low winds, in which the EPC Contractor should undertake general visual observations for dust emissions and monitor these activities if any complaints arise. • Optimize blasting design/method to minimize the generation of fine particles. • Minimise blasting to the extent possible and where feasible, consider alternatives to blasting, such as mechanical methods. • Where required, install heavy mesh blasting mats to minimize flying debris and dust. • Daily review of weather updates, to give warning of likely strong winds to assist with the management of windblown dust. • Dust generating activities will be reconsidered (or moved away or downwind of receptors) during periods of high winds conditions. • Unloading of sand and other dust generating materials at the batching plant will be avoided) during periods of high winds conditions. • All dust generating materials at the batching plant will be adequately covered and stored in enclosed or bunded containers • The EPC Contractor will obtain all the necessary permits related to the construction and operation of the batching plant. • Internal roads inside the project site will be compacted as it reduces vehicular power consumption. • Compact unpaved site roads in order to reduce dust generation and wet down key access roads and dusty areas during blasting activities if necessary. • Vehicle speeds on all non-public site access and internal site roads will be restricted to 20 km/h. • Where sand and other dusty materials are transported, trucks will not be overloaded and will be appropriately covered to avoid losses en-route.	General day-to-day visual observations for dust emissions to be undertaken during dust generating activities. Monitoring shall be Along access Road to the Project site; Construction site and laydown areas; Batching plant; OHTL Tower works; Dispersion to external receptors from point of generation. To be monitored quantitatively if generation is considered to be excessive or complaints are received. Vehicle speeds will be monitored by GPS in EPC and Sub-Contactor dedicated project vehicle as well as by radar gun 6-times a day at random locations.	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
	Ecological receptors within 50 m of the boundary of the site, and within 50 m of the route used by construction vehicles on public highway, up to 500 m from the project site entrance.	• Cement and other fine powders will be sealed or covered, stored and transported in enclosed or bunded containers. • Dusty material stockpiles (i.e., any fine sands and powders), dust generating activities (e.g., stone cutting) are to be located away from the site boundaries and be contained or covered with suitable netting to avoid dust dispersion during storage or use. • Notice will be provided to the sensitive receptors near the site as early as possible (minimum one-week notice) if there will be activities that might generate a lot of dust. • Vehicle routes will be clearly demarcated and appropriate signage displayed around the site. • Daily (or more frequent depending on conditions) wetting/damping down of demarcated unpaved site roads to reduce dust generation. • Project workers will be provided with full PPE kit including dust masks, where dust is identified as a risk to workers. • The provision of a wheel-washing facilities or high-pressure hose to ensure all vehicles leaving the site are in a satisfactory state of cleanliness, will also be provided. • Dust suppression of the concrete batching plant to be conducted regularly using recycled/treated concrete washout to minimize dust generation. • Concrete batching plant will be located away from sensitive receptors. • Wetting down of any unpaved roads used by construction vehicles in order to reduce dust generation. • No fires or burning of wastes will be allowed on-site. • Where applicable, the EPC Contractor will obtain all necessary permits required for the operation of HGV and diesel generators within emission standards.		
Gaseous emissions	Receptors within 200 m of the site or access road to be considered (in regard to vehicular emissions, but considered to be appropriate for construction plant)	• Project workers will be provided with full PPE kit including face masks. • Demarcated site roads will be compacted to reduce vehicular power and related fuel consumption. • Construction roads in the site will be designated and made clear to the drivers with signage for directions and speed limits placed all along the roads. • Unnecessary usage of vehicles, plant and equipment will be minimised – No unnecessary idling.	Pre-site authorisation checks on vehicle status and health, including associated emissions. This is for all non-road vehicles and engines.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Deliveries of equipment/plant to the site will be efficiently managed to reduce the number of trips. • Exhaust fumes and particulates emitted from trucks and vehicles will be minimised by ensuring the use of good condition vehicles (e.g. compliant to vehicle emission requirements). • Lorries and trucks engines will be turned off while waiting on site to minimize gaseous emissions. Air-conditioned or heated shelters will be provided for drivers in designated waiting, loading and unloading areas to prevent drivers waiting in vehicles. • Exhaust emissions from Project plant and vehicles will be subject to acceptance checks for authorisation of use on site. This includes a pre-requisite requirement of site vehicles to ensure no black smoke before entering site and that any identified machinery or vehicles with black smoke will require maintenance and re-assessment before it is returned. • Paved and unpaved roads along the OHTL corridor will be designated and made clear to the drivers with signage for directions and speed limits placed all along the road.	General visual observations of emissions to be undertaken on a daily basis while vehicles & equipment are in use and annual inspection of vehicles.	
Emission of VOCs and Odour	Receptors within a maximum of 100 m from source	• Hazardous materials stored and used on site with potential vapour emissions (e.g. Volatile Organic Compounds) will be located in well-ventilated, but secure low-risk areas, away from key site routes and away from the site boundary (where possible). • Volatile fuels and chemicals (including hazardous wastes) will be stored in sealed containers. On site storage of large quantities of volatile fuels will be avoided, equally prolonged exposure to direct sun and heat will be avoided. • Temporary chemical and hazardous materials (and waste) storage areas will be purpose built and well maintained. A data log of all chemicals with MSDSs will be provided at the storage facility within easy access. • Adequate and sufficient sanitary facilities for site workers must be provided. • Effective cleaning and maintenance of toilets to be undertaken to avoid odour dispersion and cleaning records/inspection sheets displayed in the toilets. • All septic tanks must be sealed and fully functioning. • Septic tanks must be operated and maintained according to manufacturer recommendations. • Sanitary waste will be removed from site by licensed contractors and disposed in wastewater treatment facilities approved by the applicable regulator.	Daily olfactory observations for odour – as part of maintenance and inspection checks. To be undertaken at all sanitary facilities available within the laydown areas, sub-contractor camps and work fields. Daily inspection of hazardous materials storage areas for any leaks or emission of VOCs. To be undertaken at all hazardous material, chemical and fuel stores.	

7.1.2 Noise & Vibration

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Construction Site Noise – Noise generated from general construction activities	Munojat Mountain **(C-1)** Marmor LLC/mining area (including mine workers) **(M-2)** Active mining area ((including mine workers) **(M-3)** Cemetery **(C-5)** Dustlik village **(R-3)** Nayman village **(R-4)** Makhtumkuli village **(R-5)**	• Where practical, additional noise barriers /attenuation will be employed to ensure that the maximum noise level at 1m distance outside of the plant fence when all equipment is running do not exceed 70dB(A) and maximum noise level at 1m from open air installations do not exceed 85dB(A). • Night-time construction works will not be undertaken. If needed these are only expected to be in the TSF area at the WTG site. • The EPC Contractor will, at all times, carry out all work in such a manner as to keep any disturbance from noise to a minimum (by phasing noisy works). • Acoustic covers on machine engines to remain closed at all times as applicable. • Where practical, electrically powered plant will be preferred to mechanically powered alternatives. • All mechanically powered plant, diesel engine vehicles and compression equipment will be fitted with noise control equipment (exhaust silencers, mufflers) as available from the manufacturer. • Where possible, the highest noise emitting activities will be undertaken in a central site area, or within an enclosed structure. For example, fabrication of materials will be carried out away from the site boundaries and or within structures. • Items of plant on site operating intermittently will be shut down in the intervening periods between use. • Dropping of metallic objects from height will be avoided as far as practicable particularly. • Ensure the permit for blasting is obtained from the relevant authorities. • The EPC contractor should consider chemical blasting where is applicable to avoid noise & vibration. For Blasting, implement the IFC Environmental, Health, and Safety Guidelines for Construction Materials Extraction where applicable: • Use of specific blasting plans; correct charging procedures and blasting ratios; delayed, micro delayed, or electronic detonators; and specific in situ blasting tests (the use of downhole initiation with short-delay detonators improves fragmentation and reduces ground vibrations). • Development of blast design, including a blasting-surfaces survey, to avoid over confined charges and a drill-hole survey to check for deviation and consequent blasting recalculations. • Implementation of ground vibration and overpressure control with appropriate drilling grids (e.g., grid versus hole length and diameter, orientation of blasting faces)	***Note:*** *Significant noise impacts are not expected and therefore no noise monitoring is proposed. Should any complaints or grievances be received then monitoring will be required by the EPC Contractor for a period following receipt of the complaint. When monitoring is required, noise measurements will be compared against the applicable Uzbek standards and applicable WHO ambient noise standards for the respective receptor type and day/night timing. The most stringent standards, whether national or international, will be adhered to.*	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		and appropriate charging and stemming process of boreholes, to limit potential issues with fly rock and air blasts. • Hydraulic hammers or other mechanical methods should be preferred to improve rock fragmentation and minimize fly-rock risks, instead of using secondary blast (plaster blasting). • Mechanical ripping should be preferably used to avoid or minimize the use of explosives. • Blasting should be conducted according to a consistent timetable. If changes to the blasting timetable occur, nearby communities should be immediately informed of those changes. • Community awareness and emergency preparedness and response planning should be undertaken, including control of third-party access to blasting areas. • As per the BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration, the following best practice measures shall be considered: - Vibration should be controlled at source and the spread of vibration should be limited, - Appropriate investigations of ground conditions should be made when preliminary surveys are being carried out in order that consideration can be given to methods of working which could avoid problems. - A survey of the immediate receptors surrounding the site should be undertaken to indicate the location of sensitive areas. Guidance should be sought concerning recommended vibration levels for the receptors surrounding the site. - Practical measures, including good blast design, that have been found to reduce air overpressure and/or vibration are: a) accurate setting out and drilling; b) appropriate charging; c) appropriate stemming with appropriate material such as sized gravel or stone chippings; d) using delay detonation to ensure smaller maximum instantaneous charges (MICs); e) using decked charges and in-hole delays; f) blast monitoring to enable adjustment of subsequent charges; g) designing each blast to maximize its efficiency and reduce the transmission of vibration; h) avoiding the use of exposed detonating cord on the surface in order to minimize air overpressure – if detonating cord is to be used in those cases where down-the-hole initiation techniques are not possible, it should be covered with a reasonable thickness of selected overburden. • Notice will be provided to the sensitive receptor as early as possible (minimum one-week notice) of periods of noisier works in regard to certain construction activities and for how long such activities will be likely to last in accordance with the SEP. • The impacted receptors will have access to a grievance mechanism in accordance with the Project SEP in order to make any complaints regarding noise during the construction phase		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Vehicular Noise- Noise from movement of construction vehicles	Munojat Mountain **(C-1)** Marmor LLC/mining area (including mine workers) **(M-2)** Active mining area ((including mine workers) **(M-3)** Cemetery **(C-5)** Dustlik village **(R-3)** Nayman village **(R-4)** Makhtumkuli village **(R-5)**	• Limit unnecessary usage of vehicles/equipment – No idling – Equipment to be shut or throttled down when in intermittent use. • Delivery vehicles will be prohibited from waiting outside the site with their engines running. • Ensure any appropriate permits are in place for deliveries to the site and for any works performed outside normal working hours. • Notify residents in proximity to the access road of noisy activities or special deliveries of large equipment to be conducted nearby their dwellings with a minimum one week in advance. • Review vendor specifications and accept site plant & vehicles, in particular heavy vehicles, based on noise emissions (as far as practical). • The movement of heavy vehicles during the night will be avoided wherever practical. • Where available in country, audible reversing alarms with broadband noise (white noise) will be preferred over tone alarms (beeping), to limit external disturbance to communities. • Where construction vehicles will be operating in close proximity to the accommodation camp, the need for trucks to reverse will be minimized as far as practicable. This is so as to reduce the frequency at which disturbing but necessary reverse warnings sirens will be used. • Speed limits established in the Traffic Management Plan will be adhered to.		
Construction vibration impacts (including vehicle vibration)	Cemetery **(C-5)** Dustlik village **(R-3)** Nayman village **(R-4)** Makhtumkuli village **(R-5)**	• The Contractors will, at all times, carry out all work in such a manner as to keep any disturbance from vibration to a minimum. • Where practical, all vibratory generating equipment and activities will be sited away from the Project boundary. • Vibrating equipment/machinery will be switched off when not in use. • Vehicles and mechanical plant will be maintained in good condition to minimise excessive vibration.		
Impacts to Construction Workers	Wind Farm and OHTL Site Workers	• Where noise levels exceed 80dB(A) noise protection devices will be provided to personnel on-site and the area marked as a high-noise zone where ear protection is mandatory. Note: 80dB(A) is aligned with Uzbekistan noise standards. • Operators of vibrating hand-held machinery (if any) will be provided with appropriate PPE (e.g., protective gloves and ear muffs/plugs) and be given suitable breaks from using such equipment to reduce the impacts of vibration.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Workers potentially exposed to high noise and vibration will be provided with appropriate PPE with respect to the occupational H&S risk assessment conducted for that activity. • Night-time construction works will not be undertaken. If needed these are only expected to be in the TSF area and may only last 1-2 hours. • Third parties will have access to a grievance mechanism to make any complaints regarding noise during the construction phase. • The EPC Contractor will carry out all work in such a manner as to keep any disturbance from noise to a minimum. • Acoustic covers on machine engines to remain closed at all times (as applicable). • Where practical, electrically powered plant will be preferred to mechanically powered alternatives. • All mechanically powered plant, diesel engine vehicles and compression equipment will be fitted with noise control equipment (exhaust silencers, mufflers) as available from the manufacturer. • Items of plant on site operating intermittently will be shut down in the intervening periods between use. • Workers potentially exposed to high noise and vibration will be trained to identify situation when PPE is required to be worn and how to effectively utilize the PPE. • These mitigation measures will be incorporated to the applicable occupational H&S plan being developed by the EPC Contractor and implemented on-site. The OHS plan will be developed in accordance with IFC EHS Guideline in relation to OHS noise and vibration.		

7.1.3 Geology, Soils & Groundwater

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Cross-Contamination of soil during construction and land degradation	Soil Quality	• Training - Contractor staff to be able to identify signs of potential contamination (smell of hydrocarbons, staining). • The EPC Contractor has confirmed that vehicle washing will only take place in dedicated cleaning facilities, which are available in nearby towns.	Prior to every blasting activity an inspection of blasting mitigation to ensure rockfall doesn't occur shall be undertaken at the blasting area.	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
and during blasting		• Where concrete washout areas will be established onsite, these areas will be located away from storm drainage and water runoff areas and will be designed with adequate holding capacity. The wastewater will be contained within the designated impervious bund. • Washout of concrete trucks will be performed in designated concrete washout areas at the site. • If contaminated soils are observed during construction activity, the identified contaminated soil will be excavated separately, and stored or disposed of in accordance with the waste management plan as hazardous waste, to avoid cross-contamination. • Any imported soils brought to the site will be from accredited quarries with certificate of quality. • A Blasting Management Plan will be prepared by the EPC that will have a section prepared by an ecologist regarding provisions for sensitive locations, seasons and vulnerable and endangered species. This will include buffer zones of 200m for priority plants, 500m from priority mammals, and a minimum of 500m from priority birds (750m from bustard nesting sites, and 1km from bustard lekking sites). • Optimize blasting design/method to minimize the generation of flying debris. • Geological and geotechnical studies and control programs, specifically focused on long-term land stability shall be carried out. • Minimise blasting to the extent possible and where feasible, consider alternatives to blasting, such as mechanical methods. • All loose rock or rock in danger of breaking is to be cleaned and secured. • Provide heavy mesh blasting mats for protection of persons, property and finished work. • Blasting shall be designed and planned by experts and carried out carefully by specialists to avoid the loosening of rock surfaces that are to remain intact. • If cracks or voids are detected in rocks and on slopes that could pose a risk, the rock is to be grouted and/or sufficiently sealed.	Inspect the blasted areas to confirm stability of rock structures after every blasting activity. Incidental sitings of visible spills & leaks of hydrocarbons and other potentially hazardous or chemical pollution sources during day-to-day activities and as part of weekly inspections.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Pollution from Accidental Leaks or Spillage	Soil Quality Groundwater Quality	• Temporary storage of hazardous materials such as chemicals at tower construction area will only be in designated chemical storage areas or in secondary containment bund. • Storage of all hazardous materials such as fuels and chemicals on an impermeable base with liners and/or secondary containment bund with enough capacity to hold 110% of the bulk storage container and 25% of the total volume of the multiple containers. • Store all chemicals/materials according to manufacturer's instructions and MSDS; MSDSs for all chemicals to be readily available on-site in close proximity to storage areas. • All hazardous materials must be labelled according to manufacturer's instruction and Good International Industry Practice (GIIP). • The chemical storage area will have proper ventilation and cover from the elements (i.e. rain, sun) and different storage areas to allow for segregation of incompatible chemicals. • All equipment using oils will have drip trays underneath to capture any oil leaks or drips. • Contractor will develop and implement an Emergency Response Plan (ERP) and Spill Response and Contingency. • Maintain an inventory of all potentially hazardous materials and chemicals used and stored on-site, including the OHTL laydown areas. • All spills and leaks will be reported promptly to the Construction Manager and to be investigated to confirm the cause and put in place appropriate corrective/preventative actions. • Spill kits will be made available at chemical storage areas and fully stocked with appropriate absorbent materials. • Refuelling and maintenance of mobile vehicles/equipment will be conducted on impermeable surface. • Availability of suitable containment and spill clean-up materials/equipment at specific locations within the project site and locations along the OHTL corridor (e.g. where refuelling is to take place). • Relevant personnel to be trained on emergency and spill response, containment, material handling and storage procedures. • Regular emergency drills to practice timely and effective spill response. • Fuel transport vehicles and equipment to be maintained and routinely inspected to ensure the tank, pumps, pipe work and the vehicle itself are free from leaks and fit for purpose-No equipment will be placed in service until deficiencies are corrected.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Implement regular maintenance program of vehicles and equipment to minimise leaks or mechanical failures and keep document evidence. • No storage of hazardous chemicals, oils or fuels within 100m of waterways or water flow path at the Project site. Additionally, storage facilities must not be located in close proximity to the Lower Amu Darya Biosphere Reserve to prevent contamination risks. • The EPC Contractor will obtain relevant permits to store large quantities of hazardous materials such as diesel etc (where necessary) in accordance with Uzbek regulations. • First aid kits will be available at all hazardous and chemical storage areas. • Concrete washout is only to be disposed in designated washing areas, with protection to soils.		
Inadequate waste management	Soil Quality Groundwater Quality	• The implementation of the project CESMP and associated Waste Management Plan and Procedures will ensure that spills are kept to a minimum and are cleaned up quickly using spill kits located in risk areas. • Develop and maintain a hazardous waste inventory to document and track and show chain of custody of hazardous wastes generated, and their disposal route. • All hazardous waste being temporarily stored outside of its designated storage areas will be kept in well-equipped, leak-tight containers with drip protection to avoid leaks to the ground. • Concrete washout will only be undertaken at designated and signed areas, with adequate protection to soils, to prevent leaks or spread of wastewater • Implementation of good housekeeping practices during construction activities including procedures and requirements for proper handling, storage, and transport of hazardous materials and waste. • The EPC Contractor and sub-contractors will provide induction training and Tool Box Talks (TBTs) relating to the management, transportation and handling of hazardous materials and wastes – in line with any procedures developed to guide the on-site management of such activities.		

7.1.4 Terrestrial Ecology & Avifauna

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Habitat Loss	<u>Project Area Habitats:</u> Gentle hilly slopes of relic low mountains	• No project materials will be sourced from quarries or borrow pits in or near Amu Darya river.	Day-to-day observations that works are within the	EPC Contractor (Relevant sub-contractors will also

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
	Steep dry stony slopes of relic low mountains Stony desert with skeleton or loamy-skeleton Sandy desert	• There will be post-construction restoration of affected construction areas to enhance existing quality of natural habitat conditions. This will improve the overall quality of natural habitat with restoration via seeding, re-planting, and landscaping with native species in naturally occurring assemblages and communities. • A Habitat Restoration Plan will outline the methods and requirements for post-construction restoration of the affected construction areas.	designated areas and not affecting external habitats. ***Note:*** *Monitoring requirements would be stated in the Habitat restoration Plan.*	need to comply with mitigation for their works)
Earthwork Clearing / Excavation -	<u>Flora</u> Nationally Important Flora (*Lepidium subcordatum*) Other Flora	• Avoid known locations of Lepidium subcordatum on site as much as possible with micro siting of turbines and other soil-disturbing activities. • Conduct pre-clearance Lepidium subcordatum surveys of all of the areas in which soil will be disturbed for construction of the Project, both temporary and permanent, and implement a rescue/relocation program for this species. A pre-clearance Survey is required to take place during the active season for Lepidium subcordatum in order to identify all specimens within the full construction footprint. These specimens shall either be retained in-situ or translocated. The specimens identified in the baseline survey (on the crest of Sultan Uvays range within the wind farm area and along the planned OTHL on the southern slope of Sultan Uvays) will be retained in-situ and clearly demarcated. In addition, training will be provided to contractors on the conservation importance of this species.	Pre-clearance survey of *Lepidium subcordatum* by the EPC Contractor Ecologist to avoid such areas during access (for LNTP and construction) and if unavoidable to translocate prior to works in these areas (LNTP and construction works)	
	<u>Fauna</u> Threatened Mammals (Goitered Gazelle, Marbled Polecat) Nationally Important Mammals (Brandt's hedgehog, Corsac Fox, Bukhara Red Deer) Other Mammals (Long-eared hedgehog, Lesser white-toothed shrew, Pie-bald shrew, etc.) Endangered Reptiles (Uzbekistan Toadhead Agama) Threatened Reptiles (Central Asian Tortoise,	• A Reptile Relocation Plan is required for the Uzbekistan Toadhead Agama, Central Asian Tortoise, and Szczerbak's Even-fingered Gecko. The Plan will outline the methodology and results of the identification of release sites, erection of fencing to exclude relocated tortoises in the construction footprint, designation and erection of livestock exclusion fencing gecko release sites, monitoring and reporting requirements as well as assigned roles and responsibilities. Full-time Ecologist as part of EPC contractor team to be on site throughout all construction works from the time of LNTP, inclusive of all early site preparation works, and throughout the entirety of the construction period. The Project clearance timeline will allow for relocation of all stated reptiles in their active seasons, prior to any clearance needing to take place. • The reintroduction of reptiles back onto the windfarm site will be undertaken post construction in accordance with technical advice from the local office representative of the Institute of Zoology. • Restricting OHTL construction activities to outside of the spring season (April-May) within areas where Bukhara Red Deer may occur on the desert piedmont slopes along the northern portion of the Project's OHTL route. • For other species, chance-find procedures with individual relocations as deemed necessary is sufficient. Chance Find Procedure will be included within the CESMP to provide general guidance on potential ecological triggers for work stoppage.	Pre-clearance survey of reptiles by the EPC Contractor Ecologist to identify potential presence of reptiles in working areas (LNTP and construction works). Day-to-day on-going observations in regard to potential chance finds of stated species. ***Note:*** *Specific monitoring in relation to CH trigger species will be stated int eh BAP.*	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
	Szczerbak's Even-fingered Gecko) Other Reptiles	• The Biodiversity Action Plan (BAP) provides the strategy designed to achieve a Net Gain (NG) for the Bukhara Red Deer.		
Vehicular Collision	All Fauna	• Strict speed controls which will be enforced by EPC HSE and Security teams; • Ban against driving outside of delineated access roads and restricting driving and machinery operation to daylight hours; • Protocol for removal of any road-kill carcasses immediately upon observation to at least 10 m away from the access roads.	Day-to-day on-going observations. Vehicle speeds will be monitored by GPS in EPC and Sub-Contactor dedicated project vehicle as well as by radar gun 6-times a day at random locations.	
"Take" Poaching, Hunting and Gathering	Flora Nationally Important Flora (*Lepidium subcordatum*) Other Flora All Fauna	• Strict controls forbidding the gathering, poaching or otherwise disturbance of any flora or fauna on site, included in induction training. Collection or poaching of flora or fauna will result in immediate dismissal. • Staff training such as toolbox talks on the importance of ecosystem integrity, especially focused on species of importance. • It should be noted that any illegal hunting is punishable by the regulator MEEPCC via the issuance of fines.	Recording of training and tool-box-talk records.	
Littering	All Flora & Fauna	• Preparation of a Waste Management Plan as one of the supplementary plans to the CESMP; • Strict waste management supervision and controls under the HSE Team; • Zero tolerance for littering on site; • Daily inspections and clean-up of litter by EPC/sub-contractor(s) responsible.	Day-to-day on-going observations	
Disturbance	All Flora & Fauna	• Minimise construction footprint and temporary laydown areas.		
Dispersal	All Fauna	• Minimise construction footprint and temporary laydown areas.		
Proliferation of Generalist Species	All Fauna	• Development of a solid waste management strategy. • Preparation of a Waste Management Plan as one of the supplementary plans to the CESMP. • Strict waste management supervision and controls under the HSE Team. • Zero tolerance for littering on site. • Daily inspections and clean-up of litter by EPC/sub-contractor(s) responsible.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• No provision of food waste for feral cats and dogs.		
Introduction of Invasive Pathogens	Nationally Important Flora (*Lepidium subcordatum*) Other Flora	• Soil imports will be taken from local quarry or borrow pit as close to the site as reasonably practical to avoid risk of foreign seeds and invasive species. • Soil imports from outside of the area will undergo checks to prevent accidental introduction of exotic species / pathogens. • Plant and machinery will require an HSE certificate of inspection, issued by the EPC, before coming onto site and this will include necessary cleaning / washing to reduce risks of importing invasive species in mud taken from urban sites. The EPC Contractor has confirmed that vehicle washing will only take place in dedicated cleaning facilities, which are available in nearby towns.	Vehicle/plant acceptance before being accepted on-site.	
Air Quality	<u>All Flora & Fauna</u>	• Refer to air quality control measures. • All tracks will be damped down to reduce risk of dust and this will be checked daily. • Implement specific blast timing and buffer zones to minimize disturbance to sensitive species and structures. • Conduct pre-blast wildlife surveys and consider adjusting blasting schedules to avoid critical wildlife periods. • A Blasting Management Plan will be prepared by the EPC that will have a section prepared by an ecologist regarding provisions for sensitive locations, seasons and vulnerable and endangered species. This will include buffer zones of 200m for priority plants, 500m from priority mammals, and a minimum of 500m from priority birds (750m from bustard nesting sites, and 1km from bustard lekking sites). • Where lizard & small mammal burrows are encountered on the project site the contractor will make efforts to ensure that they vacate their burrows prior to blasting and excavation works.	***Note:*** *As per air quality monitoring section* *Any blasting related monitoring will need to refer to measures stated in the Blasting Management Plan*	
Noise & Vibration	<u>All Fauna</u>	• Refer to noise control measures. • Restrict construction activities to daytime hours wherever feasible, particularly to minimise disturbance to nocturnal species. In addition, pre-clearance ecological surveys will be undertaken by an ecologist to identify any breeding species of conservation concern (IUCN Vulnerable or above) within the project site. If species of conservation concern or active nests are identified, appropriate exclusion zones will be established to minimize human and noise disturbance. These will be a minimum 500m from priority mammals, and a minimum of 500m from priority birds (750m from bustard nesting sites, and 1km from bustard lekking sites). • Use of acoustic barriers, dampening, best available technology within construction methodology to reduce noise and vibration as much as possible. Intermittent noise is less desirable than continuous noise as it does not allow for habituation.	***Note:*** *As per noise & vibration monitoring section*	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Light Pollution	All Fauna	• Ensure lighting is fit for purpose and duration of lighting to be controlled and minimized as much as possible. • Lights will be shielded to prevent skyglow, spill and glare. • Lighting will be designed to minimize environmental impact by utilizing low UV intensity fixtures, installed with timers in non-continuous work areas, and directed downward to reduce light pollution and minimize disturbance to local wildlife.	***Note:*** *As per landscape & visual monitoring section*	
Contamination (from spills/leaks)	All Flora & Fauna	• Refer to hazardous materials control measures, emergency action plan and spill prevention and clean up measures.	***Note:*** *As per Soils, Geology & Groundwater monitoring section*	
Soil Impacts	All Habitats & Flora	• Minimise construction footprint and strict controls to prevent driving out of designated corridors. • Habitat restoration post-construction inclusive of topsoil replacement if beneficial or soil tilling where deemed necessary to promote regrowth.		

7.1.5 Landscape & Visual Impacts

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Visual Disturbance	There are not human receptors in proximity to the WF Site. For OHTL works these will be temporary and will move along the line.	• Good housekeeping will be implemented to reduce landscape and visual impacts relating to wastes and litter. In addition, during the construction phase, construction activities will be limited to the areas required.	***Note:*** *As per Waste Management Section*	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

7.1.6 Solid Waste & Wastewater Management

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Inappropriate handling, storage, transport and disposal of solid non-hazardous waste	Receptors are not specified, but include ecology, air quality, soil & groundwater quality, visual amenity to humans and impacts to waste management facilities	• The EPC Contractor will develop and implement a Project-specific Waste Management Plan (WMP) in line with committed mitigation measures in this ESIA report and the provisions of the CESMP. • The EPC Contractor will identify the most suitable waste management facility to dispose of the generated wastes. • The EPC Contractor will identify recycling companies in the region in order to promote the recycling of waste especially packaging materials, wood and metal waste etc.	Day-to-day on-going observations of handling and storage of waste materials as per mitigation requirements.	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Domestic solid waste will be segregated and identified from the other waste streams into separate waste containers/skips clearly to facilitate recycling and reuse. • Waste containers/skips will be clearly labelled and placed in designated waste storage locations. Labels will be waterproof, securely attached, and written in English and other languages (such as Uzbek and Russian) as required for the workforce. • For litter (food waste, domestic waste), an adequate number of covered bins will be strategically placed throughout the site at locations where construction workers and staff consume food. These will be regularly collected and taken to the main waste storage area. • Food waste will be stored within a sealed metal or plastic skip or bin, in order to prevent pests gaining access. • On-going housekeeping training will be provided to all staff on the importance of the need to avoid littering. • Heavy waste may be contained within an open skip, provided that segregation occurs effectively enough to remove all lightweight material that could be blown away. • Waste generated during construction will be recycled and reused until reduced to as low as practicable prior to collection for disposal by an appropriately licensed waste contractor. • Only licensed waste transporters and waste management facilities will be engaged. • A waste inventory will be developed and maintained to document and track domestic solid wastes generated, segregated, reused and consignments • Completed waste manifests will be required to show the chain of custody of the waste generated on site, its transportation and treatment/disposal. All records will be maintained on site. • All employees will attend a mandatory training program to increase their awareness of waste management protocols including proper handling and storage of waste, recycling waste, reusing plastics, rebar, wood & other reusable non-hazardous materials.	Ensuring engaged waste management contractors, their vehicles and waste management facilities have applicable registrations/licenses at the time of contracting an ensuring valid copies are maintained at the site. All waste transfer notes shall be maintained.	
Inappropriate/uncontrolled handling, storage, transport and/or disposal of solid hazardous waste		• The EPC Contractor will identify a suitable facility to handle the hazardous wastes. • A hazardous waste inventory will be developed and maintained to document and track hazardous wastes generated, segregated, reused and consignments. • Hazardous wastes will be identified and segregated from the other waste streams into separate labelled waste containers/skips. • Hazardous wastes will be stored in allocated impervious hard standing areas in sealed containers stored with impermeable bases, sufficient containment and separation capacity, sun/rain shelter, separate drainage system, good ventilation and equipped with spill kits & spill response procedures. This area must be placed away from any sources of ignition.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Hazardous waste storage areas will be constructed away from drainage system and a rain shelter will be provided to avoid any potential instance of runoff, or leakage of runoff. • Waste containers will be clearly marked with appropriate warning labels to accurately describe their contents and detailed safety precautions. Labels will be waterproof, securely attached, and written in English and other languages as required for the workforce (such as Uzbek and Russian). Wherever possible, chemicals will be kept in their original container. • Hazardous waste storage areas will be located away from any ignition sources or fire hazards. • Used face masks will be stored in designated bins and disposed of as medical waste.		
Inappropriate/uncontrolled handling, storage, transport and/or disposal of sanitary wastewater		• The EPC Contractor will develop and implement a Project-specific Construction Waste Management Plan (CWMP) in accordance with committed mitigations measures in this ESIA report and provisions of the CESMP. • The EPC Contractor will identify a suitable wastewater treatment facility for disposal of wastewater and identify a licensed wastewater contractor for the periodic removal of wastewater. • A hazardous waste inventory will be developed and maintained to document and track sanitary waste generated and segregated. • Sanitary wastewater tanks will be placed in allocated impervious hard standing areas with bonding capacity to hold 110% volume of the maximum volume stored. • Sanitary wastewater tanks to be properly maintained and inspected to ensure tanks do not overflow. • Site inspections will be carried out regularly by the EPC contractor to ensure that all wastewater generated is properly managed, and no leakages or spill occur. In the event of a spill or overflow, immediate action will be taken in accordance with spill containment procedures and clean up procedures (to be developed in line with the CESMP). • In common with the IFC EHS Guidelines, effort will be made in training construction personnel to minimise water consumption for ablutions and to ensure an understanding of water resource and wastewater issues.		
Inappropriate handling and disposal of contaminated soil from clearing and excavation works causing		• The construction workforce will receive training enabling them to be able to identify signs of potential contamination (e.g., smell of hydrocarbons, staining). • If contamination is found, a Contaminated Soil Management Plan will be developed and implemented to ensure appropriate handling, treatment and disposal of soil		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
cross-contamination of soils				
Inappropriate handling of concrete washout		• Concrete washout will only be undertaken in designated and signed areas to prevent leaks or spread of wastewater. • The concrete washout area will be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations. • The concrete washout area will have an impermeable surface with dedicated drainage systems that lead to separate sumps or treatment facility. • The removal of any sludge residues as solid hazardous waste will be undertaken by a licensed waste contractor and handled as a hazardous waste.		
Medical Waste		• Any generated medical waste (e.g., from on-site clinics) shall be stored in appropriate medical waste containers. • All medical waste shall only be handled by trained personnel. • The removal of any medical waste from the site for appropriate treatment, disposal/incineration will only be conducted by a licensed contractor.		

7.1.7 Traffic & Transportation

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Traffic Impacts	Road users along transport route of WTG components	• A final route survey report will be completed. • The conclusions and recommendations of the Route Survey report such as sections of the road that will require to be upgraded, need for electricity shutdown etc. will be implemented • Preparation and implementation of a Traffic and Transportation Management Plan. The plan will be prepared in accordance with IFC General EHS Guidelines, and will outline how turbine components will be delivered to the site and how construction traffic will be managed to limit impacts upon other road users, construction personnel and any local communities. • The Plan will include information on the permits required for transport, the designated access routes, site entrance points, speed limits, waiting, parking areas and map out accident and traffic hotspots for project access vehicles. • The local police and other relevant authorities will be consulted during the development of the Plan.	All records of applicbael transportation related premits and the validity and renewal of permits & licenses shall be maintained on-site. Record keeping in case of vehicle accidents or incidents, inclusing police reports.	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Transportation of materials over railroad crossing must be organised according to the train schedule and coordinated with relevant authorities as required by law. • Final road condition of the selected transportation route will be checked before transportation of any oversized loads to determine that the required improvements have been put in place. • Where transportation of equipment/materials is to be undertaken during the winter season or on wet or windy periods, additional safety and precaution measures will be implemented in order to ensure the safety of other road users and integrity of the road infrastructure and materials being transported. • Ensure that any equipment/materials transported across border crossings meet all the legal requirements including those relating to customs. • Construction access road into the site will be clearly signposted. • Buses will be used to transport the construction workforce and carpooling among staff will be encouraged. • Route directions and speeds limit will be placed along the access road into the project site in relevant local languages. • Deliveries of construction materials will be coordinated to reduce congestion on local roads and to reduce the waiting time for the drivers. • Where applicable, the EPC Contractor will obtain the relevant permits to transport heavy loads into the project site and adhere to the stipulated conditions (i.e. delivery routes and timings). • Where applicable, the EPC Contractor will notify the local communities on delivery of wide/heavy loads and how it could potentially impact their road use. • Road closures and diversions as a result of project component transportation will be kept to a minimum and wherever practicable peak transportation hours must be avoided to reduce impacts on commuters & road user. • Oversize & heavy load vehicle's drivers will be competent and legally authorised to operate such vehicles in the Uzbekistan and across borders where applicable. • The EPC Contractor will provide awareness training on traffic safety to the local people in collaboration with local police office. • All traffic incidents and near misses will be recorded and investigated with any necessary corrective actions taken including reporting to local police. • A grievance mechanism will be established to allow local road users and communities to make complaints relating to Project traffic and transportation. • Compensation of any livestock injured by Project vehicles will be conducted in coordination with community leaders and local officials.	Incidents involving livestock and wildlife will also be recorded. Record of traffic/transportation related grievances received, response period, close-outs, as per the GRM. Vehicle speeds will be monitored by GPS in EPC and Sub-Contactor dedicated project vehicle as well as by radar gun 6-times a day at random locations.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Project drivers will not be permitted to transport any unauthorised personnel or goods.		

7.1.8 Archaeology & Cultural Heritage

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Direct Impacts to Unknown Buried Archaeology	Unknown buried artefacts	• An archaeological 'Chance Find Procedure' will be developed prior to construction and the start of site earthworks, as part of / or alongside the CESMP. This will include protocols and procedures to stop work and methods to preserve potential finds, as well as reporting requirements and co-ordination with the Institute of Archaeology. • The Chance Find Procedure will include a (i) generic guide for the identification of cultural heritage finds, (ii) requirement for work stoppage in the event of chance finds, (iii) protocols for temporary demarcation and avoidance of further disturbance of chance finds, (iv) notification of designated archaeological experts, (v) watching brief for in-situ protection and/or subsequent expert extraction of cultural heritage finds for off-site preservation, (vi) increased vigilance and expert supervision upon confirmation of archaeological chance finds, and (vii) related reporting requirements. • Construction work (specifically excavations) must take place under the supervision of an archaeologist. • Where artefacts or archaeological remains are encountered, the site will be clearly signed/delineated with high visibility flagging to impede access and prevent any damage or loss of the artefacts which have been found. • All direction concerning the management of potential archaeological finds must only be taken from the Institute of Archaeology. • The EPC Contractor will receive training from the Institute of Archaeology about the Chance Finds Procedure and key processes to follow concerning any suspected archaeological finds to avoid disturbance. • The removal of any archaeological artefacts from the site is strictly prohibited.	Daily continued visual observations by site staff involved in excavations.	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works)

7.1.9 Socio-economics

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Employment Opportunities	Employment Market	• Where suitably skilled workers are available, including women. The EPC Contractor will aim to engage 50% of the workforce from Uzbekistan and local communities, where suitably skilled workers aer available.	Number of persons employed from the villages near the Project site	EPC Contractor (Relevant sub-contractors will also need to comply with

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The EPC and sub-contractors' HR Policy will be prepared to ensure consistency in line with local labour laws and international ILO and UN conventions. The EPC Contractor is to ensure that this is applied as an overarching policy for all sub-contractor company HR policy as part of their contractual arrangements. • EPC Contractor will undertake local community consultation during recruitment process in order to consider equitable job opportunity distribution among the locals to avoid conflict between the local people • The EPC Contractor will provide equal employment opportunities to women and preferences will be given to local women for unskilled and semi-skilled labour positions.		mitigation for their works) Project Company (for external party GRM)
Training and dissemination of construction skills	Local Population	• All Project workers will receive induction training at the Project, as well as vocational specific training for on-site construction works. • All workers will receive training in regard to health and safety, as well as environmental and social awareness, GBV and SEA/SH. • The Project Company will develop a GRM for SEA/SH issue and will map service providers for any past records of SEA/SH incidents. • Toolbox talks will be conducted before work on each day to ensure workers are reminded of key topics. • Cultural awareness training for all foreign workers and those coming from other regions in Uzbekistan.	All training records will be maintained.	
Purchase of construction materials and food resources locally	Local/Regional Economy	• The EPC Contractor will purchase goods and materials from the local/regional economy where possible. • The EPC Contractor will purchase some of the food products such as meat, milk from the suppliers. • Establish market network between the Project workers and the local people where possible in consultation with the community leaders. Monitor prices of basic commodities.	All grievance records from external parties to be maintained as per the GRM	
	Inflation in prices of locally sourced construction materials and food supplies	• The EPC Contractor will ensure that the influx in workers does not lead to an increase in retail prices of basic commodities by providing the workers with food or giving them transportation to larger towns where they can buy food and non-food items.		
Consumption of Water	Water Resources	• The EPC Contractor will engage a licensed water tanker trucks and obtain relevant permits. • Prior to engaging a licensed water supply company, the EPC Contractor will determine the source of the water to be used for the Project. • Where water is sourced from the same water supplier that nearby villagers use, the EPC Contractor will undertake sustainability assessment to ensure that the Project's water	Maintain licenses of water delivery companies. Maintain records of water deliveries and water quality reports.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		demand does not create a shortage for the local communities or drive up the price of water. • The Project workforce will be trained on ways to minimise water consumption and to ensure they understand water resources and resource efficiency. • The grievance mechanism will allow communities to lodge any complaints or concerns regarding water issues related to the Project. • Water storage tanks, pipes, taps etc. will be inspected for leakage and repaired immediately once identified.		
Disproportionate impacts on vulnerable groups	Vulnerable groups & women	• The CLO will regularly undertake informal meetings including with women focus groups & vulnerable groups to ensure that on-going stakeholder engagement is gender inclusive. • The Project Company will ensure that the EPC Contractor employs a female within the social experts who will support the CLO in addressing potential gender-based violence and harassment issues. • Implementation of mitigation and management measures provided under Community Health, Safety & Security and Labour & Working Conditions.	All stakeholder engagement records and consultations to be maintained.	
Disruption of Local Custom	Welfare of Local Communities	• The EPC Contractor will provide adequate training to the non-local workers in the Project, especially in terms of interaction with the local community members. • Local residents will be able to report concerns associated with loss of cultural values through the grievance mechanism. • The EPC Contractor will adopt a zero-tolerance policy towards unacceptable workforce behaviors towards females or any community members i.e., sexual harassment or violence. • The grievance mechanism will be made available to the local communities i.e., community members can make verbal or written complaints at the Project security gate or request to speak to the Environmental Manager	All training records to be maintained. All grievance records from external parties to be maintained as per the GRM	
Land Acquisition	Herders at WF /farmers owners of structures along	• Standalone report will be prepared to access impacts due to the land acquisition for WF and OHTL and propose compensation, livelihood restoration programs • The GRM process and contact details have been provided to the herder and family in accordance with the SEP. • The EPC Contractor will clearly mark out construction areas which will be inaccessible during the construction phase of the Project. • If required, alternative access roads for the local communities will be identified before access to any of the existing roads is restricted. The alternative roads must be in good condition to allow for vehicle, livestock passage and safe for walking. • The Community Liaison Officer will notify the communities of any access restrictions.	Please refer to the project Land Acquisition and Livelihood Restoration Plan (LALRP) for relevant monitoring requirements	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The construction schedule will be shared with the community. • Signs will be put in place in local languages to show the alternative access routes available to the herders and local communities once the construction areas have been demarcated. • Monitoring will be conducted to ensure that the PAPs livelihoods are not impacted in the future.		

7.1.10 Community Health, Safety & Security

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Worker Influx	Local communities	• Where suitably skilled workers are available, the EPC Contractor will aim to engage 50% of the workforce from Uzbekistan and local communities. • Worker accommodation areas will be managed in accordance with the EBRD and IFC Workers' Accommodation: Processes and Standards. The provision of good quality living accommodation, services and amenities will likely reduce the need for mixing with local communities. Gender aspects will be considered in the worker accommodation. • Project induction training will include a section on code of conduct when engaging with local community members. This will include an overview of culturally and religious appropriate measures and etiquette to bear in mind. • Sexual harassment or violence in and out of the Project site will not be tolerated and the EPC Contractor will work with local community leaders, gender-based organisations and government officials to ensure that any complaints are addressed in accordance with the law. • The EPC Contractor will develop a Worker Influx Management Plan to provide a clear set of actions that will be undertaken for the management and mitigation, monitoring and evaluation of impacts related to worker influx in the Project area. • Additional management and mitigation measures will be in accordance with the World Bank guidance note on Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labour Influx (2016).	Record of any conflict between the workers and community members including any cases relating to sexual harassment	EPC Contractor (Relevant sub-contractors will also need to comply with mitigation for their works) Project Company (for external party GRM)
Public/Community Health		• The Health and Safety teams on site will provide advice during training/inductions on exposure to disease including preventative measures e.g., TB, STDs and HIV/AIDS. • During construction, staff will have access to medical professionals and suitable medical facilities, which will aim to prevent the spread of diseases internally and externally. Site personnel will only be cleared for work with a medical fitness certificate from an authorised medical center.	Record of human rights violation/complaints from the local communities Record of incidents/accidents and	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The EPC Contractor will prepare a medical evacuation emergency plan with contact details for local ambulance services. • Any reportable disease will be diagnosed by the authorised occupation health centre doctor. Diagnosis includes identifying any new symptoms, or any significant worsening of existing symptoms. • Any external and internal spreading diseases will be diagnosed and precautions will be taken as per the instructions from the national/ local medical authority. • The potential for exposure to water-borne, water-based, vector-borne diseases and communicable diseases as a result from project activities will be avoided or minimised. • Potholes will be filled immediately to prevent the breeding of bacteria and parasites that may pose a risk to the health of the communities near the site. • The EPC Contractor, in coordination with the local authorities, will conduct awareness campaigns regarding the transmission of STIs in the communities near the Project site. • Workers will be provided with free condoms and advice will be given on how to access testing in public hospitals. • Information regarding the transmission of HIV/AIDS will be prepared and disclosed in a culturally sensitive manner and targeted towards young adults of consenting age.	near misses (involving external parties) Record of any communicable diseases on site that could pose a risk to the local communities	
Public/Community Safety		**Impact to Aviation** • WTG final positions (coordinates) and height information will be provided to CAA prior to installation/erection of WTGs. • The final NOC should be obtained from CAA and Ministry of Defence before the start of construction. • If required by CAA, red aircraft lighting will be installed on the hub and/or blade tips of the WTG (to be agreed before the WTGs are erected). **Other Public/Community Safety** • The employees during the construction phase shall undergo a Code of Conduct training to ensure smooth coordination with the neighbouring community. • Risks to public safety will be appropriately addressed and prepared for in the construction phase 'Emergency Preparedness and Response Plan' and training. • The plan will include the appropriate procedure to respond to any such incidents, as well as site specific contact details and details of external agencies who may be required.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Project induction training will include a section on Code of Conduct when engaging with local community members. This will include an overview of culturally appropriate measures and etiquette to bear in mind. • All high-risk areas including fuel storage areas will be secured with internal fencing and will be patrolled by security throughout the day. • Smoking will be prohibited at chemical and fuel storage areas. • Appropriate mechanisms for emergency control (e.g., well-equipped firefighting equipment) will be placed at suitable positions around the site.		
Project Security - Public/Community Security		• The Project will employ its own security staff who will provide 24/7 security control across the Project site and dedicated security staff at gatehouses. Where possible and practical the security staff will be employed from the local communities. • The security staff will be employed based on local regulations. • The EPC will prepare a Security Plan consistent with its Security Risk Assessment. • Security arrangements shall be guided by UN Code of conducts for law enforcement officials, Voluntary Principles on Security and Human Rights and UN basic principles on the use of force and Firearms by law enforcement officials (where firearms are in use). Security personnel will follow a strict code of conduct and will be trained in weapons handling, human rights and receipt of grievances. • Any use of firearms will be in accordance with the Uzbekistan legal requirements. • All vehicles entering the site will require pre-approved clearance and will need to be registered. Project security will record all instances of incoming vehicles. • CCTV will be installed at key locations around the site and at gatehouses. • Appropriate lighting will be provided at gatehouses for security personnel to prevent unauthorised access. • Project personnel will only be provided access to the construction site with valid ID cards and permits to work in line with HSE requirements. • People trying to gain unauthorized access to the site without appropriate permits and PPE will not be permitted, or will be removed from site if identified and an investigation carried out on how they were able to access the site and corrective action taken. • GBVH related grievances must be handled by specially trained professionals in this regard who must apply a victim-centred approach.	Discharging of firearms by security personnel on site	
Human Rights Risks	Local Communities – Right to Security	• Substance abuse prevention and management programs will be provided to workers;	All training records will be maintained	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The Project will provide training to local law enforcement staff on management of illicit behavior; • A Workers' Code of Conduct will be developed and implemented to guide any interaction with local communities. • Regular and sporadic site checks with regards to substance abuse will be conducted at accommodation camps whilst respecting workers' freedom of movement rights. • Prior to the commencement of construction, local communities will be informed about the risks of entering the Project site • Security arrangements at the Project site will be guided by UN Code of conducts for law enforcement officials and UN basic principles on the use of Force and Firearms by law enforcement officials (where firearms are in use). Security personnel will follow a strict code of conduct and will be trained in weapons handling and human rights. • The EPC Contractor will develop and implement a Security Plan that will outline expectations with regards to security management.		
	Local Communities – Right to Health	• The EPC Contractor will make provisions for suitable health clinic and medical professionals at the Project site. • Arrangement should be made with other regional hospitals so that the services to the local communities are not undermined.	n/a	
	Local Communities – Economic Right (Economic Displacement of Herders)	• The Project is not expected to negatively impact the livelihood of the local community, including the herder or his family. The herder family will remain a stakeholder in the SEP for the implementation of the Project and will have access to the GRM should any issues need to be raised. Issues will be dealt with on a case-by-case basis.	Number of grievances closed out Average time for grievance processing and close out and trends Number of grievances open, method to submit the grievance and trends Topics raised in grievances and trends	
	Vulnerable Groups – Right of Ethnic Minorities	• EPC Contractor to provide adequate training to the non-local workers in the Project, especially in terms of interaction with the local ethnic minority; • Allow locals including residents to report concerns through the Grievance Mechanism; • EPC Contractor will adopt a zero-tolerance policy towards unacceptable workforce behaviour towards females or any community member. • Project induction training will include a section on code of conduct when engaging with local community members. This will include an overview of culturally and religious appropriate measures and etiquette. • Sexual harassment or violence in and out of the Project site will not be tolerated and the EPC Contractor will work with local community leaders, gender-based		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		organizations and government officials to ensure that any complaints are addressed in accordance with the law.		
	Vulnerable Groups – GBV, SEA & SH	• The Project Company and the EPC Contractor will conduct a GBV/SEA/SH risk assessment in consultation with relevant stakeholders including women leaders and those working with young adolescent girls and boys. This will also include the identification of potential interventions and risk mitigation measures. • A Project-specific GBVH Policy detailing the list of unacceptable behavior among workers, provisions for reporting, sanctions for perpetrators and available resources & support systems for the victims will be prepared and implemented in accordance with lenders and Uzbek requirements including ACWA Power's Environmental & Social Management System Implementation Manual. • Awareness training will be mandatory for all Project workers regarding the GBV/SE/SH risks and the workers responsibilities and the legal consequences of being a perpetrator. • Training will be provided to the community members on the risks of GBV/SEA/SH and information provided on how to report any cases of GBV/SEA/SH and the services that will be made available to offer support to any of the victims. • Approach towards GBV/SEA/SH prevention, mitigation and response will be survivor centered and ensure confidentiality, dignity and respect. • The Project staff will be trained on how to preserve the safety of the women, girls, boys when interviewing them and collecting information about their experiences on GBV/SEA/SH. • The Project will provide essential services for survivors such as access to counselling services, support groups, legal support etc. at no cost to them. • All determined cases of GBV/SEA/SH will be referred to relevant legal entities in the Project area for further investigation and prosecution. • GBVH related grievances must be handled by specially trained professionals in this regard who must apply a victim-centered approach. • The Project grievance mechanism will be made available to project workers and community members and will ensure that survivors' information is confidential and kept anonymous. • All cases relating to GBV/SEA/SH shall be documented and closed. • The EPC Contractor will prepare and implement a GBV/SEA & SH Prevention and Response Action Plan which will put necessary protocols and mechanisms to address the risks of GBVH/SEA/SH and how to address any allegations that may arise in accordance with the World Bank Good Practice Note on Addressing SEA/SH in Investment Project Financing involving Major Civil Works and the EBRD Guidance Note on Addressing GBVH.	Number of SEA/SH grievances handled through a survivor centred approach Record of average period taken to handle SEA/SH grievances in accordance with lenders requirements and referral to legal entities	

7.1.11 Human Rights, Labour & Working Conditions

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Occupational Health and Safety	Project Workers	• Workers will be provided with a safe and healthy work environment, considering inherent risks and specific classes of hazards associated with the Project. • Trained specialist will handle the blasting activities. • Specific personnel training on explosives handling and safety management will be conducted. • Explosives storage will adhere to relevant standards, with restricted access limited to trained personnel exclusively. • After blasting, qualified personnel will inspect blasting sites for malfunctions and unexploded blasting agents before work resumes. • The EPC Contractor will implement and maintain an OHS management system taking into account specific risks associated with the Project, legal requirements and duty of care. • The EPC Contractor will be responsible for ensuring that all affiliated sub-contractors comply with the OHS management system. The OHS management system will be in-line with recognised international best practice and as a minimum, this plan will include: • Means of identifying and minimising, so far as reasonably practicable, the causes of potential H&S hazards to workers. • Provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances. • Provision of appropriate equipment to minimise risks, and requiring and enforcing its use. • Training of workers, and provision of appropriate incentives for them to use and comply with H&S procedures and protective equipment. • Emergency prevention, preparedness and response arrangements	Records of contracts, payments, receipt of benefits, leave entitlements, retrenchment etc. All training records will be maintained. OH&S Emergency Situations and Incidents Documentation and reporting of occupational accidents, diseases and incidents.	EPC Contractor
Human Right Risk to Workers – Right to Work, Forced Labour, Right to Adequate Standard of Living, Non-Discrimination		• Local workers will be considered for available positions depending on skills & qualifications. • The Project's process for employment will consider the availability of local talent. • The EPC contractor will not make employment decisions on the basis of personal characteristics, such as gender, race, nationality, ethnic origin, religion or belief, disability, age or sexual orientation, unrelated to inherent job requirements. • The EPC contractor will not employ forced labour, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of	Number of women employed in the project including their rank and renumeration compared to men occupying the same positions.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		force or penalty. This covers any kind of involuntary or compulsory labour, such as indentured labour, bonded labour or similar labour-contracting arrangements. • Workers will be provided with easily understandable contracts that include details of their benefits, deductions (if any and within the limits of the law) and obligations. In addition to the copy signed for the EPC records, the employees will also be provided with a copy for their records. • Employees will be free to terminate their employment in accordance with the Uzbekistan Labour Code • The EPC contractor will provide a plan detailing how working conditions and terms of employment are compliant with national labour, social security and occupational health and safety laws. • Employees will be provided with suitable accommodation and worker accommodation areas will be managed in accordance with the EBRD and IFC Workers' Accommodation: Processes and Standards. The provision of good quality living accommodation, services and amenities will likely reduce the need for mixing with local communities. • Employment relationship will be on the principle of equal opportunity and fair treatment and will not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment including provisions for maternity/paternity leave, accommodation, access to training, promotion, termination of employment or retirement, and discipline. • Special measures of protection or assistance to promote local employment opportunities or selection for a particular job based on the inherent requirements of the job, which are in accordance with national law, will not be deemed discrimination.	Quality and cleanliness of Sanitation Facilities, Office Spaces, Welfare and Rest Areas Inspection/internal audit of worker accommodation facilities vs. IFC & EBRD standards	
Human Right Risk to Workers - Child Labour		• The EPC contractor will comply with all relevant national laws, lenders requirements and ILO provisions related to the employment of minors. • The EPC Contractor will devise a management procedure to ensure that all workers are above the minimum legal age of employment at the time of hiring. This will include the verification of official personal registration documents i.e., national ID, passport etc. • Young people below the age of 18 years will not be employed in hazardous work and all work of persons under the age of 18 will be subject to an appropriate risk assessment. • Where workers under the age of 18 are employed, the EPC Contractor shall establish a system to regularly monitor the working conditions and working hours of such young workers in line with Uzbek Labour Code.	Grievances including those relating to gender-based violence and harassment, sexual exploitation & abuse and sexual harassment	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Human Right Risk to Workers - Wages, working hours, right to rest, benefits, and retrenchment		• HR policies and procedures will be adapted appropriately to the size of the workforce required for the Project. Policies and procedures must be prepared to demonstrate consistency with the requirements of national legislation and IFC PS 2 and include a code of conduct on GBVH/SEA/SH. • The EPC contractor will document and communicate to all workers their working conditions and terms of employment including their entitlement to wages, hours of work, overtime arrangements and overtime compensation, and any benefits (such as leave for illness, maternity/paternity, or holiday). • Wages, benefits, leave days and other conditions of work offered should, overall, be comparable to those offered by equivalent employers in the relevant region of that country/region and sector concerned. • The wages to all the workers (skilled and unskilled) will be enough to guarantee a living wage for all the workers (i.e., adequate food, clothing and housing). • Workers will be provided equal remuneration for work of equal value. • Workers will receive their pay on time and in full for ordinary and overtime hours, as well as paid leave. • Wages will be paid regularly based on the agreed pay-day and adequate notice provided where exceptional circumstances necessitate change in the regular pay day. • Where required, workers will be provided with the option of flexible work schedule in order to manage personal obligations while adequately fulfilling their employment duties. • If the EPC contractor anticipates collective dismissals associated with the proposed project, the EPC contractor will develop a plan to mitigate the adverse impacts of retrenchment, in line with national law and good industry practice and based on the principles of non-discrimination and consultation. Without prejudice to more stringent provisions in national law, such consultation will involve reasonable notice of employment changes to the workers' representatives and, where appropriate, relevant public authorities so that the retrenchment plan may be examined jointly in order to mitigate adverse effects of job losses on the workers concerned. The outcome of the consultations will be reflected in the final retrenchment plan.		
Human Right Risk to Workers - Workers Right to Health		• During construction, workers will have access to medical professionals and suitable medical facilities, which will aim to prevent the spread of diseases internally. Site personnel will only be cleared for work after with a medical fitness certificate from an authorized medical centre; • Any reportable disease will be diagnosed by the authorized occupation health centre doctor. Diagnosis includes identifying any new symptoms, or any significant worsening of existing symptoms;		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Any internal spreading diseases will be diagnosed and precautions will be taken as per the instructions from the national/ local medical authority; • The potential for exposure to water-borne, water-based, vector-borne diseases and communicable diseases as a result from project activities will be avoided or minimized; • EPC Contractor will comply with Uzbek sick leave requirements.		
Human Right Risk to Workers – Collective Bargaining and Freedom of Association		• HR Policies shall include the ability of workers to form or join all types of associations. • HR Policies shall include the ability of workers to join a Trade Union; as well as ensure collective bargaining rights of workers. • Trade unions must be permitted to function freely subject only to limitations that are in line with the Uzbekistan Labour Code and the International Human Right standards.		
Human Right Risk to Workers – Freedom of Movement		• Workers will be allowed to move freely and interact with local communities • EPC Contractor to provide adequate cultural sensitization training during induction training to the workers, especially in terms of interaction with the local community members; • EPC Contractor will adopt a zero-tolerance policy towards unacceptable workforce behaviour towards any community member. • Workers will be provided adequate periods of leave to enable them travel to their home countries and spend time with their families.		
Gender Risk - Gender Based Violence and Harassment		• The workers will be provided with information regarding worker code of conduct in local languages as part of their employment contract which will include provisions for reporting, investigations, termination and disciplinary action against those who perpetrate gender violence and harassment. • The EPC Contractor shall conduct mandatory regular training and awareness raising for the workforce about gender-based violence and harassment towards local community members and their colleagues especially women and the availability of a grievance mechanism to report any GBVH/SEA/SH cases. • The workers shall be made aware of the laws and regulations that make sexual harassment and gender-based violence a punishable offence which is prosecuted. • Ensure inclusion of a balanced representation of women on the HSE team who will be easily relatable and approachable to female workers. • Project personnel in charge of receiving GBVH/SEA/SH grievances will be provided with appropriate training on how to handle such complaints. It is recommended that the personnel are trained in coordination with any GBVH organisations working in the Project area where available.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Female workers will be included in the grievance redress committee to help female workers and host community female members raise their grievances. • Regular consultations should be undertaken with women on their concerns about the project • The EPC Contractor will work to identify a suitable labour pool locally in order to minimize the need for bringing large number of workers from other regions or countries. This could also help the EPC Contractor in cutting cost associated with provision of accommodation facilities if the majority of the workers are sourced locally. • Provision of opportunities for the workers to regularly return to their families who may be located far from the Project site. • The EPC Contractor will provide opportunities for workers to have access to entertainment opportunities away from the host communities. • EPC Contractor will allow submission and investigation of anonymous sexual harassment complaints by workers and host community members and protect the confidentiality of the complainants. • The EPC Contractor will work in close coordination with the local authorities in investigating any complaints relating to gender violence and harassment in the host communities where it relates to Project workers. • The EPC Contractor will provide targeted training (including in life skills such as leadership and decision-making) and awareness raising to vulnerable workers such as women. • The EPC Contractor will prepare a Gender Equality and GBVH/SEA/SH Policy in line with Uzbek and lenders requirements. This will include provision of training to workers, subcontractors and suppliers on GBVH associated risks.		
Gender Risk - GBVH/SEA/SH in Accommodation Facilities		• The EPC shall provide safe, secure and separate accommodation facilities and sanitary facilities for the male and female workers (lockable sanitary facilities will be mandatory for women). • The EPC Contractor will provide separate social facilities for the men and women. • Worker accommodation areas will be managed in accordance with the EBRD and IFC Workers' Accommodation: Processes and Standards.		
Gender Risk - Wage discrimination based on Gender		• EPC Contractor to provide access to recruitment opportunities for women based on their qualifications. • EPC Contractor will develop a Local Recruitment Plan that ensures equal opportunities are provided to women in the employment process, training and promotions		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The EPC Contractor shall implement an equal wage policy for women employees. • Women will be provided equal remuneration as their male counterparts for work of equal value.		
Gender Risk- Discrimination Based on Employment Benefits & Guarantees		• The EPC Contractor will include the benefits and guarantees for both men and women in the HR policy with a clear commitment to non-discrimination during the recruitment process. • EPC Contractor to improve employment opportunities by developing guidelines to ensure that discrimination against women on the basis of their marital or reproductive status is avoided. • The EPC Contractor shall implement a zero-tolerance process for discrimination against women.		
Gender Risk – Discrimination Based on Sexual Orientation		• The EPC Contractor's HR policy will include a non-discrimination policy and a code of conduct. • The EPC Contractor's HR policy will include GBVH policy applicable to all employees and sub-contractors. • Sexual violence or harassment will not be tolerated and the EPC Contractor will include this in the worker's code of conduct which will be provided in the local languages. • The grievance mechanism will be made available to all workers at no cost and without risk of retribution. • The EPC Contractor will provide gender and inclusion orientation to its workforce in a culturally appropriate manner in order to eliminate the risk of harassment and violence.		
Risks Related to Supply Chain	Supply chain workers	• ACWA Power & the Project Company will develop a Supply Chain Management Plan and an E&S Supplier & Vendor Management Plan. • ACWA Power & the Project Company will ensure its core suppliers will implement the recommendations from the Supply Chain audit in relation to Envision's supply chain management system. • ACWA Power & the Project Company will establish a responsible sourcing policy to ensure traceability from wind turbine suppliers. • ACWA Power and the Project Company will ensure that Envision and its core suppliers adopt self-covenants and codes to the loan agreement mandating the suppliers to map and complete risk assessment of the core WTG components. • Envision must provide a Letter of Commitment to the Project Company which states that the suppliers involved in production/assembly of turbines will be locked	Note: As per monitoring in line with the respective supply chain management system.	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		contractually and any new or replacement supplier will go through a separate due diligence process to confirm no association with child and forced labour risks. • A Corrective Action Plan (CAP) will be developed and implemented to address the gaps identified during the supply chain assessment and to address any non-compliances that that will be identified in future audits • ACWA Power & the Project Company will notify the lenders when labour risks such as forced/child labour or allegations are raised in relation to their core suppliers. • ACWA Power and the Project Company will ensure that Envision and its core suppliers keep all records, rules and policies in relation to workers protection and the provision of safe working conditions. • A dis-engagement clause will be added to the loan agreement in case of material non-compliance with the measures listed above.		

7.2 Operational Phase Mitigation & Monitoring

7.2.1 Air Quality

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Air Quality		***Note:*** *As the operation of the wind farm and OHTL will not include combustion related activities, there will be no direct emissions to the local air-shed as a result of primary project operations. The corona effect which is explained in more depth in the Noise and Vibration chapter (Section 7) of this ESIA can produce ozone and oxides of nitrogen in the air during humid conditions however, such gases will be released in small quantities and any associated impact will be negligible.* *The operation and maintenance (O&M) requirements of the wind farm and OHTL will necessitate limited use of vehicles and delivery/removal vehicles along access roads to undertake inspection and maintenance activities. Emissions from these vehicles will be very minor and are unlikely to result in discernible impacts at receptors.* • In the event of submitted grievances that relate to air quality these will be investigated on a case-by-case basis and after investigation appropriate mitigation would be considered respective to the impact.	Tracking of any air quality related grievances (if submitted). In the event of mitigation related to air quality grievances, monitoring may be required on a case-by-case basis to confirm success of	O&M Company

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
			the adopted mitigation approach.	

7.2.2 Noise & Vibration

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Noise & Vibration		***Note:*** *Following identification of potential operation noise impacts, it has been determined that there is unlikely to be any operational noise impacts of significance as result of the operation of the Project. Therefore, no operational noise mitigation measures are proposed.* • In the event of submitted grievances that relate to noise and/or vibration these will be investigated on a case-by-case basis and after investigation appropriate mitigation would be considered respective to the impact.	Tracking of any noise & vibration related grievances (if submitted). In the event of mitigation related to noise & vibration grievances, monitoring may be required on a case-by-case basis to confirm success of the adopted mitigation approach.	O&M Company

7.2.3 Soil, Geology & Groundwater

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility

Accidental minor Leaks & Spillage	Soil Quality	• Operator to develop and implement an Emergency Response Plan (ERP) to include or link to a Spill Response and Contingency Plan. • Conformance with ERP procedures (preventative and response) will be monitored through routine inspections. • Appropriate training of staff in regard to the handling and response to spill/leak events. • Availability of complete spill kits in all hazardous material storage areas. • Availability of MSDS on-site for any chemicals in use (to be made available at the chemical storage area). • Availability of a chemical register for all the hazardous chemicals on site. • Storage of all hazardous materials such as fuels and chemicals on an impermeable base with liners and/or secondary containment bund with enough capacity to hold 110% of the bulk storage container and 25% of the total volume of the multiple containers. • The chemical storage area will have proper ventilation and cover from the elements (i.e. rain, sun) and different storage areas to allow for segregation of incompatible chemicals. • O&M Company to ensure that sanitation facilities have effective leak tight plumbing systems and the manholes will be inspected regularly for any blockage. • If used in landscaped areas, the application of fertilisers and pesticides must be limited and monitored. • Use of any toxic/non-biodegradable pesticides will be prohibited in accordance with the Stockholm Convention on banned chemicals. • Only organic, chloride free and environmentally friendly fertilizers will be applied. • O&M will obtain relevant permits to transport and dispose any hazardous waste from operational processes.	Incidental siting's of visible spills & leaks of hydrocarbons and other potentially hazardous or chemical pollution sources during day-to-day activities and as part of periodic inspections.	O&M Company
	Groundwater			

7.2.4 Terrestrial Ecology & Avifauna

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Habitat Fragmentation	All Fauna	• The site will not be fenced.	***Note:*** *No specific monitoring proposed*	O&M Company
Turbine Collision	Birds	• Planned infrastructure within the wind farm shall not include elements attractive for birds, such as lattice towers that provide perching possibilities. • Upfront curtailment in the form of shutdown is not required in light of the low predicted collision rates.	3-years of Fatality Monitoring, which includes carcass searches, searcher bias trials, and	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility

		• A Collision Risk Management Plan will be formulated which includes the following:
		  ○ Acceptable Mortality Thresholds for all priority species, which are calculated on the basis of Potential Biological Removal;
		  ○ Adaptive management program which indicates how anti-collision mitigation shall be applied and upscaled in the event that fatality monitoring indicates that mortality thresholds are being exceeded. An example of mitigation should the mortality thresholds be exceeded is the potential use of curtailment during peak migration periods or in areas where endangered species like the Steppe Eagle or Golden Eagle are frequently observed.
		• The Biodiversity Action Plan (BAP) provides the strategy designed to achieve No Net Loss (NNL) for the Common Crane.
			persistence trials, and correction factors to be applied for estimating fatalities
			
			Note: *Monitoring measures to be stated in the Collison Risk Management Plan shall be implemented.*
			
			Monitoring measures to be stated in the BAP for the Common Crane shall be implemented.	

Turbine Collision	Bats	• Prevention of elements that may attract bats, or insects and therefore bats:
		  ○ All WTGs, particularly the nacelles, will be designed, constructed and maintained in such a manner that they minimise the support for roosting bats (to the extent possible as per wind turbine design);
		  ○ Use lighting only as needed and use wavelengths and designs that do not attract insects or bats;
		  ○ Bright white or bluish lights (mercury vapor, white incandescent and white florescent) are the most attractive to insects. Yellowish, pinkish, or orange (sodium vapor, halogen, dichroic yellow) are the least attractive to most insects. LED bulbs are less attractive because they produce low heat and long wavelengths of light as well as little or no ultraviolet radiation.
		  ○ Prevent retention of water and growth of weeds/shrub as well as hedges and shrubs that may attract insects in the immediate vicinity.
		• A Collision Risk Management Plan will be formulated which includes the following:
		  ○ Acceptable Mortality Thresholds for all priority species, which are calculated on the basis of Potential Biological Removal.
		  ○ Adaptive management program which indicates how anti-collision mitigation shall be applied and upscaled in the event that fatality monitoring indicates that mortality thresholds are being exceeded. An example of mitigation should the mortality thresholds be exceeded is the potential use of cut-in curtailment during times when acoustic monitoring shows higher levels, which can be seasonal, specific timings, or correlated to specific wind speeds and meteorological conditions.
			3 years of Fatality Monitoring, which includes carcass searches, searcher bias trials, and persistence trials, and correction factors to be applied for estimating fatalities.
			
			Acoustic monitoring to understand how species composition and bat activity indices relate to meteorological conditions. On the one met mast (to be installed) two detectors will be installed at differing heights and detectors will be placed at approximately 2 m	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
			ABGL on two of the turbines. Further details will be provided in the Collision Risk Management Plan. ***Note:*** *Monitoring measures to be stated in the Collison Risk Management Plan shall be implemented.*	

OHTL Collisions	Birds	• Removing the thin neutral or earth (shield) wire above the high voltage transmission lines where feasible, and where this is not possible, marking the line to make it more visible;
		• Bundling high voltage wires, and using spacers to increase visibility;
		• Minimising the vertical spread of power lines. Having lines in a horizontal plane reduces collision risk;
		• Using bird deflectors to increase line visibility by thickening the appearance of the line by a minimum of 20 cm over a length of 10-20cm; or using markers that are moveable, of contrasting colours (e.g. black and white), contrast with the background, protrude above and below the line. The same concept will be used on all project OHTL lines.
		• Any markers must be robust to allow long-term durability for the environmental conditions of exposure; maintenance plans for the OHTL should include inspections of marker devices and replacements as needed.
		• A Collision Risk Management Plan will be formulated which will include the following:
		  ○ Acceptable Mortality Thresholds for all priority species (including the Common Crane), which are to be calculated on the basis of Potential Biological Removal;
		  ○ Adaptive management program which indicates how anti-collision mitigation shall be applied and upscaled in the event that fatality monitoring indicates that mortality thresholds are being exceeded. An example of mitigation should the mortality thresholds be exceeded include the following:
		  ▪ Potential increase in the number of bird diverters on OHTL sections where fatalities are concentrated, in which additional diverters will be installed at closer intervals to further enhance line visibility for large bird species.
			3-years of Fatality Monitoring, which includes carcass searches, searcher bias trials, and persistence trials, and correction factors to be applied for estimating fatalities.
			
			Note: *Monitoring measures to be stated in the Collison Risk Management Plan and BAP shall be implemented.*	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The Biodiversity Action Plan (BAP) provides the strategy designed to achieve No Net Loss (NNL) for the Common Crane. • Great Bustard population monitoring will further support the suite of mitigation measures already being put in place during design and operation of the OHTL, as OHTL collision is a leading issue for large bustard species including Great Bustard.		
OHTL Electrocution	Birds	• The following mitigation measures will be implemented to further reduce electrocution risk (note: the same concept will be used on all project OHTL lines): o Ensure a safe design of the cross arm and related equipment (separate energised conductors and grounded hardware distances by more than largest species wingspan) o Use suspended insulators and avoid pin and dead-end/strain insulators o Ensure safe distance (minimum 2 m) between suspended conductor/jumper wire and lower branch in the cross arm. o In the configurations with high electrocution risk (derivations, tap, transformer and switch poles and its connected grounded wires and jumpers) all grounded elements should be insulated, and grounded wires and jumpers should be sheathed wires. o Design will be as per recommendations provided in Reference Note: Quick Guidance for Preventing Electrocution Impacts on Birds, Initiated by International Association for Falconry and Conservation of Birds of Prey. o Provide safe perching and nesting opportunities via the erection of perching poles and/or nesting platforms or boxes; they should be the highest elements of the structure to attract birds away from perching on potentially dangerous components.		
Disturbance	Al Fauna	***Note:*** *Specific mitigation and monitoring is not proposed.*		
Dispersal				
Noise & Vibration		***Note:*** *As per noise & vibration monitoring section*	***Note:*** *As per noise & vibration monitoring section*	
Light Pollution		***Note:*** *As per landscape & visual monitoring section*	***Note:*** *As per landscape & visual monitoring section*	

7.2.5 Landscape & Visual Impacts

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Landscape	The impression of Landscape Character to human receptors	***Note:*** *Visibility of a wind farm is inevitable and the efficacy of landscape and visual mitigation measures beyond the site selection and layout is extremely limited.*	n/a	n/a
Visual Disturbance	There are not human receptors in proximity to the WF Site.	• Good housekeeping will be implemented to reduce landscape and visual impacts relating to wastes and litter.	***Note:*** *As per Waste Management Section*	O&M Company

7.2.6 Solid Waste & Wastewater Management

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Inappropriate handling, storage, transport and disposal of non-hazardous solid waste	Receptors are not specified, but include ecology, air quality, soil & groundwater quality, visual amenity to humans and impacts to waste management facilities	• The O&M Company will develop and implement a Project-specific Operational Waste Management Plan (OWMP) in line with committed mitigation measures in this ESIA report and the provisions of the OESMP. • Domestic solid wastes to be segregated and identified from the other waste streams into separate waste containers/skips clearly to facilitate recycling. • Waste containers/skips should be clearly labelled and placed in designated waste storage locations. Labels will be waterproof, securely attached, and written in English and other languages as required for the workforce such as Uzbek and Russian. • For litter (food waste, domestic waste), an adequate number of covered bins should be strategically placed throughout the site at locations where construction workers and staff consume food. These will be regularly collected and taken to the main waste storage area. • Food waste must be stored within a sealed metal or plastic skip or bin, in order to prevent pests gaining access. • Heavy waste may be contained within an open skip, provided that segregation occurs effectively enough to remove all lightweight material that could be blown away. • Paper cardboard, metal cans, plastic, glass to be collected for recycling by a licensed waste contractor. • Only licensed waste transporters and waste management facilities will be engaged. • The Contractor will maintain copies of the waste management licensed on site. • Develop and maintain a waste inventory to document and track domestic solid wastes generated, segregated, reused and consignments	Day-to-day on-going observations of handling and storage of waste materials as per mitigation requirements. Ensuring engaged waste management contractors, their vehicles and waste management facilities have applicable registrations/licenses at the time of contracting an ensuring valid copies are maintained at the site. All waste transfer notes shall be maintained.	O&M Company

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Completed waste manifests are required to show the chain of custody of the waste generated on site, its transportation and treatment/disposal. All records will be maintained on site.		
Inappropriate/uncontrolled handling, storage, transport and/or disposal of sanitary wastewater		• Sanitary facilities should be provided with adequately designed underground storage tanks. • Sanitary wastewater tanks to be properly maintained and inspected to ensure tanks do not overflow. • Sanitary wastewater tanks in allocated impervious hard standing areas with bunding capacity of 110% volume of the maximum volume stored. • Sanitary wastewater treated at the onsite sewage treatment plant must meet established limit for landscaping. • Where there are no onsite sewage treatment plant, a licensed waste contractor will be engaged for the periodic removal of tank.		
Inappropriate/uncontrolled handling, storage, transport and/or disposal of solid hazardous waste		• Develop and maintain a hazardous waste inventory to document and track hazardous wastes generated, segregated, reused and consignments. • Segregate and identify hazardous waste from the other waste streams into separate waste containers/skips clearly signed and labelled. • Store hazardous waste in allocated impervious hard standing areas in sealed containers stored with impermeable bases, sufficient containment and separation capacity, sun/rain shelter, separate drainage system, good ventilation and equipped with spill kits & spill response procedures. This area must be placed away from any sources of ignition. • The O&M Company will establish an on-site storage facility (i.e., designated holding area) where electronic O&M refuse, including spent batteries, will be kept prior to scheduled transportation to specialized recycling facilities in or out of Uzbekistan (in accordance with the Hazardous Waste Management Plan). • Waste containers should be clearly marked with appropriate warning labels to accurately describe their contents and detailed safety precautions. Labels will be waterproof, securely attached, and written in English and other languages as required by the workforce such Uzbek & Russian. Wherever possible, chemicals will be kept in their original container. • Used face masks shall be stored in designated bins and disposed of as medical waste. • A Hazardous Materials Management Plan will be developed prior to COD and implemented for the Project's O&M phase. The Plan will include arrangements and provisions (i.e., storage area/capacity, frequency of collection, distance of nearest disposal facilities) for various streams of waste, in consideration of the location of their respective management/ disposal facilities.		

7.2.7 Traffic & Transportation

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Traffic Impacts	Local road users	• Operational phase workers will be encouraged to carpool wherever possible to limit the number of vehicles along the local roads.	n/a	O&M Company

7.2.8 Archaeology & Cultural Heritage

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
n/a – Specific impacts to archaeology & cultural heritage are not anticipated during operations.				

7.2.9 Socio-economics

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Sustainable supply of energy	NEGU	• Ensuring that the appropriate operation and maintenance of the Wind Farm to enable a secure supply of renewable energy	n/a	O&M Company
Employment Opportunities	Employment Market	• The Project's recruitment policy will ensure a preference for employing workers from the local population especially women where appropriately skilled workers are available locally (or if unskilled positions are available). • The HR Policy will be prepared to ensure consistency with the ACWA Power's Environmental & Social Management System Implementation Manual which will ensure compliance with local labour laws and international ILO and UN conventions. • Workers will be encouraged to develop their careers and may be provided with opportunities to attend training courses and other career development processes. • Training plans to be developed and implemented to facilitate career development and advancement within the local workforce.	Number of persons employed from the villages near the Project site Al training records will be maintained All GRM records will be maintained as per the GRM	Project Company (for external party GRM)
Training and dissemination of skills	Welfare of Local Population	• All Project workers will receive induction training at the Project, as well as vocational specific training for on-site works, as required • All workers will receive training in regard to health and safety, as well as environmental and social awareness, GBV and SEA/SH. • The grievance mechanism will be confidential and provide referral and support system for any workers reporting cases of GBVH and SEA/SH. This system will also map relevant service providers, including legal, medical, and psychological support services, to ensure comprehensive assistance for affected individuals.		

7.2.10 Community Health, Safety & Security

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Public/Community Safety	Herders and communities	**Wind Farm – Blade and Ice Throw** • In order to minimise the likelihood of blade failure, wind turbines that have been subject to independent design verification/certification, and surveillance of manufacturing quality will be selected in accordance with IFC EHS Guideline on Wind Energy. • Periodic blade inspections should be carried out and any defects that could affect blade integrity should be repaired immediately. • Wind turbines should be equipped with vibration sensors that can react to any imbalance in the rotor blades and shut down the turbine if necessary **OHTL** • The OHTL towers will be installed in accordance with GIIP. • The required HPZ around the OHTL will be implemented. • Automatic fault/damage detection system will be installed to enable early detection of any faults with OHTL installation. • The tower will be tested for collapse to ensure design and installation is in line with NEGU & GIIP. **OHTL – EMF** • Installation of cables at increased height above ground to allow for agricultural activities and movement of machinery under the OHTL to continue. This will also reduce EMF exposure to farm workers. • All land users along the RoW will be provided with a written document which will include land use restrictions and an explanation of safety risks to them in case of violations i.e., construction of new buildings within the HPZ, planting certain trees or crops etc. • After provision of such information, land users will be required to sign a form as proof they were briefed and they understand the future restrictions and potential risks (including EMF). • Safety signals and warning signs will be posted along the OHTL. • EMF safety program for Project workers will be managed through the development of a robust Operational phase Occupational Health & Safety Plan in line with best industrial practices. • Identification of potential exposure levels in the work area including surveys of exposure levels and establishment of safety zones.	Record of incidents/accidents and near misses (involving external parties) Number of grievances closed out Average time for grievance processing and close out and trends Number of grievances open, method to submit the grievance and trends Topics raised in grievances and trends	O&M Company Project Company (for external party GRM)

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Access and maintenance of the OHTL will be limited to trained workers who are equipped with suitable PPE. **Wind Farm & OHTL** • All risk to public safety will be appropriately addressed and prepared for in the operational phase 'Emergency Preparedness and Response Plan' and training. • The plan will include the appropriate procedure to respond to any such incidents, as well as site specific contact details and details of external agencies who may be required. • The employees during the operational phase shall undergo a Code of Conduct training to ensure smooth coordination with the neighbouring community. • Appropriate mechanisms for emergency control (e.g., firefighting equipment) will be placed at suitable positions around the site. • A Grievance Redressal Mechanism shall be made accessible to the community to ensure that community members raise grievances to the Project leadership. • Sexual harassment or violence in and out of the Project site will not be tolerated and the O&M Company will work with local community leaders and government officials to ensure that any complaints are addressed in accordance with the law. • The Health and Safety teams on site will provide advice during training/inductions on exposure to disease including preventative measures e.g., TB, STDs and HIV/AIDS.		
Public/Community Security		• The Project will employ its own security staff who will provide 24/7 security control across the Project site and dedicated security staff at gatehouses. • The security personnel will be regularly trained on GBVH code of conduct including how to handle grievances related to GBVH from the community. • All vehicles entering the site will require pre-approved clearance and will need to be registered. Project security will record all instances of incoming vehicles. • CCTV will be installed at key locations around the site and at gatehouses. • Appropriate lighting will be provided at gatehouses for security personnel to prevent unauthorised access. • Project personnel will only be provided access to the construction site with valid ID cards and permits to work in line with HSE requirements.	All training records will be maintained Discharging of firearms by security personnel on site Number of SEA/SH grievances handled through a survivor centred approach Record of average period taken to handle SEA/SH grievances in accordance with lenders requirements	
Gender Based Violence & Harassment, Sexual Exploitation and Abuse (SEA)		• The Project Company and the O&M Company will conduct a GBV/SEA/SH risk assessment in consultation with relevant stakeholders including women leaders and those working with young adolescent girls and boys. This will also include the identification of potential interventions and risk mitigation measures.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
and Sexual Harassment (SH)		• Awareness training will be mandatory for all Project workers regarding the GBV/SEA/SH risks and the workers responsibilities and the legal consequences of being a sexual or violence perpetrator. • Training will be provided to the community members on the risks of GBV/SEA/SH and information provided on how to report any cases of GBV/SEA/SH and the services that will be made available to offer support to any of the survivors. • Approach towards GBV/SEA/SH prevention, mitigation and response will be survivor centered and ensure confidentiality, dignity and respect to them. • The Project staff will be trained on how to preserve the safety of the women, girls, boys when interviewing them and collecting information about their experiences on GBV/SEA/SH. • The Project will provide essential services for survivors such as access to counselling services, support groups, legal support etc. at no cost to them. • All determined cases of GBV/SEA/SH will be referred to relevant legal entities in the Project area for further investigation and prosecution. • The Project Grievance Mechanism will be made available to Project workers and community members and will ensure that survivors' information is confidential and kept anonymous. • All cases relating to GBV/SEA/SH shall be documented and closed. • The O&M Company will prepare and implement a GBVH/SEA & SH Prevention and Response Action Plan which will put necessary protocols and mechanisms to address the risks of SEA/SH and how to address any allegations that may arise in accordance with the World Bank Good Practice Note on Addressing SEA/SH in Investment Project Financing involving Major Civil Works.	and referral to legal entities	

7.2.11 Human Rights, Labour & Working Conditions

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
Occupational Health and Safety	Project Workers	• Workers will be provided with a safe and healthy work environment, taking into account inherent risks and specific classes of hazards associated with the Project. • The Project's Operator will implement and maintain an OHS management system specific to the operational phase taking into account specific risks associated with the project, legal requirements and duty of care.	Records of contracts, payments, receipt of benefits, leave entitlements, retrenchment etc.	O&M Company

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• The Operator of the OHTL will ensure that adequate training with regards to electrocution, working at height and other risks is provided to O&M personnel responsible for maintenance works along the transmission line • The Project's Operator will ensure that adequately rated equipment such as hoisting/lifting equipment, tool bags and power tools are given to O&M personnel. • The Project's Operator will be responsible for ensuring that all affiliated sub-contractors comply with the OHS management system. The OHS management system will be in-line with recognised GIIP and as a minimum, this plan will include: o Means of identifying and minimising, so far as reasonably practicable, the causes of potential H&S hazards to workers. o Provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances. o Provision of appropriate equipment to minimise risks, and requiring and enforcing its use. o Training of workers, and provision of appropriate incentives for them to use and comply with H&S procedures and protective equipment. o Documentation and reporting of occupational accidents, diseases and incidents. o Emergency prevention, preparedness and response measures	All training records will be maintained. OH&S Emergency Situations and Incidents Documentation and reporting of occupational accidents, diseases and incidents.	
Human Right Risk to Workers –Forced Labour, Right to Adequate Standard of Living, Non-Discrimination		• The O&M Company will not employ forced labour, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labour, such as indentured labour, bonded labour or similar labour-contracting arrangements. • The O&M Company will not make employment decisions on the basis of personal characteristics, such as gender, race, nationality, ethnic origin, religion or belief, disability, age or sexual orientation, unrelated to inherent job requirements. • Employment relationship will be on the principle of equal opportunity and fair treatment, and will not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment including provisions for maternity/paternity leave, accommodation, access to training, promotion, termination of employment or retirement, and discipline. • Special measures of protection or assistance to promote local employment opportunities or selection for a particular job based on the inherent requirements of the job, which are in accordance with national law, will not be deemed discrimination.	Number of women employed in the project including their rank and renumeration compared to men occupying the same positions. Quality and cleanliness of Sanitation Facilities, Office Spaces, Welfare and Rest Areas	
Human Right Risk to Workers – Child Labour		• The O&M Company will comply with all relevant national laws, lenders requirements and ILO provisions related to the employment of minors.	Grievances including those relating to gender-	

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• Young people below the age of 18 years will not be employed in hazardous work and all work of persons under the age of 18 will be subject to an appropriate risk assessment.	based violence and harassment, sexual exploitation & abuse and sexual harassment	
Human Right Risk to Workers – Wages, working hours, right to rest, benefits, and retrenchment		• Wages, benefits, leave days and other conditions of work offered should, overall, be comparable to those offered by equivalent employers in the relevant region of that country/region and sector concerned. The wages to all the workers including to any unskilled workers will be enough to constitute for a living wage. • If the O&M Company anticipates collective dismissals associated with the proposed project, the O&M Company will develop a plan to mitigate the adverse impacts of retrenchment, in line with national law and good industry practice and based on the principles of non-discrimination and consultation. Without prejudice to more stringent provisions in national law, such consultation will involve reasonable notice of employment changes to the workers' representatives and, where appropriate, relevant public authorities so that the retrenchment plan may be examined jointly in order to mitigate adverse effects of job losses on the workers concerned. The outcome of the consultations will be reflected in the final retrenchment plan.		
Gender Risk- Discrimination Based on Employment Benefits & Guarantees		• The Project Company will develop partnerships with local education providers to promote STEM careers for young women through a women-focused outreach initiative to publicise the new internship programme. • The Project Company will Introduce a new and certified internship programme to equip at least 20 young women (i.e. at least 5 per year) with higher skill levels, in collaboration with the local education partners.		
Gender Risk- Gender Based Violence and Harassment		• The workers will be provided with information regarding worker code of conduct in local languages as part of their employment contract which will include provisions for reporting GBVH (either in person or anonymously), investigation procedure, termination and disciplinary action against those who perpetrate gender violence and harassment. • The O&M Company shall conduct mandatory regular training and awareness raising for the workforce about gender-based violence and harassment towards local community members and their colleagues especially women. • The workers shall be made aware of the laws and regulations that make sexual harassment and gender-based violence a punishable offence which is prosecuted. • Mandatory and regular training for workers on required lawful conduct in host communities and legal consequences for failure to comply including dismissal. • O&M shall provide safe, secure and separate living spaces and sanitary facilities for the male and female workers (lockable sanitary facilities will be mandatory for women). • Provision of opportunities for the workers to regularly return to their families.		

Potential Impact	Receptors	Mitigation and Management Measures	Monitoring	Responsibility
		• O&M Company will allow submission and investigation of anonymous sexual harassment complaints by workers and host community members and protect the confidentiality of the complainants. • The O&M Company will work in close coordination with the local authorities in investigating any complaints relating to gender violence and harassment in the host communities where it relates to Project workers. • O&M will identify local based GBVH/SEA/SH organizations that can offer support to those who experience violence or harassment. • The O&M's HR policy will include a non-discrimination policy and a code of conduct. • The O&M's HR policy will include GBVH policy applicable to all employees and sub-contractors.		

7.3 Monitoring Requirements

As is outlined in the following section, a specific 'Environmental & Social Monitoring Plan' will need to be developed as part of the construction and operational phase ESMS. The Environmental & Social Monitoring Plan shall elaborate further on the requirements for monitoring summarised above and further stated in the ESIA Volume 2, with the following:

- What parameters need to be monitored and measured and at what locations;
- The methods for monitoring measurement, analysis and evaluation to ensure valid results;
- The criteria against which compliance and performance should be measured;
- When and at what frequency monitoring needs to be performed;
- How the results from monitoring and measurement should be analysed and evaluated (independent or internal);

The outcomes of the monitoring regime should ensure:

- The timing of monitoring and measurement is coordinated with the need for analysis and evaluation of results;

- The results of monitoring and measurement are reliable, reproducible and traceable; and
- Analysis and evaluation are reliable and reproducible and enable the project to report trends.

7.4 Monitoring Data

Monitoring results should be documented and compared against the relevant standards, KPIs, permit and/or ESAP requirements.

The E&S team of the EPC Contractor or O&M Company will need to define appropriate action to follow in the instance that any exceedances in monitoring limits are confirmed or adverse impacts identified, including:

- Communication protocol in the event that an exceedance is identified;
- Internal review process of recently performed maintenance and inspection;
- Review of previous monitoring data to identify any potential associated variations or trends in results;
- Recommendations for quarantine of equipment or change in work practices; and
- Review of monitoring frequency to ensure the issue does not re-occur.

The repetition of measurements is an essential part of monitoring as it detects changes over time and should alert to potentially positive or negative effects of an activity. The frequency of monitoring will be defined in the E&S Monitoring Plan. Adverse effects should trigger a review of mitigation measures and determination of the likely root cause/source of the impact. Should no effect be detected it may demonstrate a lack of effect, success of mitigation measures or the requirement to continue monitoring over a longer period of time.

Data from the monitoring for comparison against baseline and all previous monitoring efforts to identify trends in condition and make inferences on the success of implemented mitigation measures.

8 E&S MANAGEMENT PLANS & PROCEDURES

Once environmental & social aspects and associated risks have been identified and documented, associated controls will be developed that are commensurate to the level of anticipated severity, likelihood and any statutory or lender requirements.

8.1 Top-Level E&S Management Plan (CESMP and OESMP)

The key E&S management plans will be the CESMP and OESMP; respective to construction and operations.

Note: *Due to the early phase construction scope required for the EPC Contractor on the Project, there is also a LNTP CESMP that has been developed to cover these work elements.*

The CEMSP and OESMP will comprise a stand-alone document structured to detail how environmental and social risks, impacts, opportunities and compliance will be managed and monitored. This shall be the top-level management plan document prepared by the EPC Contractor and O&M Company respectively.

The typical content of a CESMP/OESMP has been outlined below. This is not mandatory to be structured in this manner, but it is expected that the headings and sub-headings as a minimum are captured within the respective CESMP/OESMPs.

- INTRODUCTION
  - Scope of the CESMP/OESMP
  - Objectives of the CESMP/OESMP
  - Structure of the CESMP/OESMP
  - Limitations
- PROJECT DESCRIPTION
  - Project Rationale and Background
  - Project Location
  - Land Use
  - Sensitive Receptors
  - Overview of Project Components
  - Overview of Associated Facilities
  - Overview of Construction/Operational Works and Workforce Requirements
  - Overview of Construction/Operational Facilities
  - Project Schedule (for CESMP)
- REGULATORY FRAMEWORK

- Background of Project Environmental Permitting (and status)
- Overview of Regulatory Framework and Compliance Obligations
    - Regional and International Treaties and Conventions (Uzbekistan is a signatory of)
    - Uzbekistan Legislation
    - Lenders Requirements
    - Environmental Standards

- ENVIRONMENTAL AND SOCIAL MANAGEMENT

- Summary of Environmental and Social Management System (ESMS)
- Reference to E&S Policies
    - Project Company E&S Policy
    - Other EPC E&S Policy (if applicable)
- Statement of other supporting/complementary Plans and Procedures
- Organisational Structure
    - MEEPCC
    - Project Company
    - EPC Contractor (for LNTP CESMP and CESMP) / O&M Company (for OESMP)
    - Sub-contractors
- HSSE Roles and Responsibilities
- Competency Needs for HSSE staff
- Environmental Awareness and Training
    - Environmental & Social Induction Training
    - Toolbox Talk Environmental & Social Training Sessions
    - CESMP/OESMP and other specific E&S Training
- Internal and External Communications
    - Internal Communication
    - External Communication
    - Liaison with Regulator
- Inspections and Audits
    - Daily and Weekly Inspections
    - Internal Audits
    - Annual Internal Audits
    - External Audits
- Non-conformity, Incidents and Corrective Action
    - Non-Conformity, Investigation and Response
    - Incident Definition, Reporting, Investigation and Response
    - Corrections and Corrective Actions
- Control of Records

- MITIGATION, MANAGEMENT AND MONITORING
  - Air Quality
  - Noise & Vibration
  - Soil, Geology, and Groundwater
  - Hydrology and Surface Water
  - Terrestrial Ecology and Avifauna
  - Landscape and Visual Amenity
  - Solid Waste and Wastewater Management
  - Traffic and Transportation
  - Archaeological and Cultural Heritage
  - Socioeconomics
  - Community Health, Safety & Security
  - Labour and Working Conditions
  - Climate Affairs
- MONITORING SUMMARY
- APPENDICES.

8.2 Supporting ESMS Management Plans

In alignment with the expected Project impacts (based on ESIA Volume 2), the following table provides a list of plans that have been identified to be part of the construction and/or operational phase ESMS documents.

Table 8-1 Supporting ESMS Management Plans

Plan / Procedure	Responsibility	Purpose and Key Requirements
Reptile Relocation Plan	Pre-clearance	A Reptile Relocation Plan is required for the Uzbekistan Toadhead Agama, Central Asian Tortoise, and Szczerbak's Even-fingered Gecko. The Plan will outline the methodology and results of the identification of release sites, erection of fencing to exclude relocated tortoises in the construction footprint, designation and erection of livestock exclusion fencing gecko release sites, monitoring and reporting requirements as well as assigned roles and responsibilities. Full-time Ecologist as part of EPC contractor team to be on site throughout all construction works from the time of LNTP, inclusive of all early site preparation works, and throughout the entirety of the construction period. The Project clearance timeline will allow for relocation of all stated reptiles in their active seasons, prior to any clearance needing to take place.
Biodiversity Action Plan	Post-construction	Measures intended to achieve a "net gain" for CH triggering species will be developed in consultation with regional stakeholders and implementation partners and described in the Project's Biodiversity Action Plan (BAP).

Plan / Procedure	Responsibility	Purpose and Key Requirements
Habitat Restoration Action Plan	Post-construction	The purpose of the plan is to provide the methodology for post-construction restoration of laydown and other areas for re-wilding and restoration of native habitat types. The requirements will include the areas to be restored as well as the required monitoring post-restoration
Fatality Monitoring Plan	Pre-operation and Operation	Monitoring will be done to capture data on mortalities and provide adaptive management if needed. The monitoring will be continued for up to three years. This plan will outline the on-going monitoring and management plan for mortality along the WTGs and overhead transmission lines. It will include as a minimum: • Methodology for monitoring mortality • Thresholds for sightings/mortality counts that will trigger adaptive management and/or compensatory measures • Monitoring program • Reporting requirements.
Collision Risk Management Plan	Pre-operation and Operation	This plan shall include: • Mitigation measures for reducing collision risk to birds and bats • Potential Biological Removal Thresholds • Details of Potential Cut-in Speed Curtailment (the potential use of curtailment during peak migration periods will be determined should fatality monitoring indicate that mortality thresholds are being exceeded.) • Adaptive Management • Reference to Fatality Monitoring • Reporting requirements • Roles and Responsibilities
Stakeholder Engagement Plan	Construction & Operation	***Note:*** *Being prepared in parallel to ESIA stage for the Project.* To identify project stakeholders, identify communication protocols for engagement with stakeholders. To identify frequency or event-based communication with stakeholders (i.e. for emergencies and specific grievances). To detail the grievance mechanism, or provide a reference to a separate grievance mechanism for external parties.
Grievance Mechanism	Construction & Operation	***Note:*** *Being incorporated into the SEP, which is being prepared in parallel to ESIA stage for the Project.* To identify the procedure for external parties and all site staff to be able to raise issues, concerns and opportunities for improvement for any aspect of their employment on the project including issues relating to GBVH and sexual exploitation. The mechanism shall be easily accessible (including for any vulnerable groups), non-discriminatory and provide a transparent process to raise concerns or complaints, which may be issued in an anonymous nature. The mechanism shall specify the roles and responsibilities of internal staff with regard to the grievance mechanism and the procedure for responding to received grievances, including the timeline for response, engagement mechanisms and record keeping.

Plan / Procedure	Responsibility	Purpose and Key Requirements
Occupational Health & Safety Plan	Construction & Operation	Identify the required controls for worker health and safety during the construction, commissioning and operational phases. As a minimum, this plan will include: • Means of identifying and minimising, so far as reasonably practicable, the causes of potential hazards to workers. • Provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances. • Provision of appropriate equipment to minimise risks, and requiring and enforcing its use. • Training of workers, and provision of appropriate incentives for them to use and comply with health and safety procedures and protective equipment. • Documentation and reporting of occupational accidents, diseases and incidents. Emergency prevention, preparedness and response arrangements.
Emergency Preparedness and Response Plan	Construction & Operation	To identify the contingencies put in place for a variety of potential emergency situations relevant to the construction, commissioning & operational phases. The plans will outline the response mechanisms, roles and responsibilities, training requirements, internal communication, equipment and relevant engagement with external stakeholders. Requirements for on-site equipment will be established based upon the potential emergency risks, including training provisions for site personnel in regard to such equipment. This plan is to include spill response and contingency in the event of accidental leaks and spills.
Waste Management Plan	Construction & Operation	To identify site specific requirements for waste and wastewater management, containment of wastes (segregation, storage area specifications and locations), collection methodologies & transport (identification of licensed contractors and the process to engage), treatment/disposal (identification of licensed treatment and disposal sites), record keeping and reporting requirements related to waste and wastewater. To include measures to limit instances of contamination to soils and groundwater.
Hazardous Material Management Plan	Construction & Operation	To identify locations for material storage, storage requirements and handling procedures to minimise environmental and H&S risks. Specific method statements regarding the handling of materials shall be detailed, as well as training requirements for staff involved in such activities. The plan will identify locations for hazardous material storage, storage requirements (specifications of bunds and buildings/warehouses to ensure environmental and H&S protection, segregation requirements etc.) and handling procedures to minimise environmental risk. The plan will outline record keeping as per chain of custodies, requirements for MSDS and roles & responsibilities. Staff involved in chemical

Plan / Procedure	Responsibility	Purpose and Key Requirements
		management, procurement or overseeing on-site deliveries shall be specified in the plan and provided with training for the provisions of this plan (all training to be linked to the training plan). To identify locations for any fuel and chemical unloading, associated training requirements and associated pollution attenuation/spill response equipment that are to be in place regarding any unloading of fuel to larger tanks or chemicals to storage areas on-site. This should be linked or inclusive to the pollution prevention plan.
Water Management and Implementation Plan	Construction & Operation	This plan will details the specific mitigation measures to be implemented to manage and conserve available water resources during construction. The plan will include but not be limited to the following information: • Identifying all potential wastewater sources, potential composition, treatment techniques and discharge points. • Specifying the water conservation initiatives to be implemented at construction camps.
Environmental & Social Monitoring Plan	Construction & Operation	Monitoring is required to demonstrate compliance with national environmental & social standards and lender requirements. The monitoring plan is to specify monitoring requirements for all ESIA parameters (as specified in ESIA Volume 2 – as a minimum). The plan will therefore need to include: • What parameters need to be monitored and measured and at what locations. • The methods for monitoring measurement, analysis and evaluation to ensure valid results. • The criteria against which compliance and performance should be measured. • When and at what frequency monitoring needs to be performed. • How the results from monitoring and measurement should be analysed and evaluated (independent or internal).
Traffic & Transportation Management Plan	Construction & Operation	The plan will identify any specific requirements for heavy, or oversize loads, including timings of deliveries, specific routes (to minimise disruption), engagement mechanisms with external transport authorities (as per the SEP, e.g. local government). To include measures to minimise congestion, fuel use and risks to the public and site staff. Deliveries will be guided by a Traffic Management Plan.
Archaeological Chance Find Procedure	Construction	To identify the process for identifying and responding to a potential find of archaeology in the construction working area. It will include the process for halting works in that area, sectioning off potential artefact and external communication with relevant regional authorities as consistent with SEP.
Human Resources Policy (and	Construction & Operation	Human resources policies and procedures will be adapted appropriate to the size of the workforce required for operation and maintenance requirements. Policies and procedures must

Plan / Procedure	Responsibility	Purpose and Key Requirements
related Procedures)		be prepared to demonstrate consistency with the requirements of national legislation and lenders requirements. There is a need to prepare a workers 'Code of Conduct'.
Workers Accommodation Plan	Construction	This plan will outline the process and standards for the accommodation for the Project workforce. It will include accommodation areas directly managed by the Project, or rented/shared to accommodate direct Project employees and/or temporary or other contract staff (dedicated to the project). Accommodation areas in use by sub-contractor companies/staff (where staff are dedicated for the Project) will also be included.
SEA & SH Prevention & Response Action Plan	Construction & Operation	This plan will include specific arrangements for the Project by which SEA/SH risks will be addressed. It will include as a minimum: • Awareness raising strategy which describes how workers (regardless of rank) and local communities will be sensitized to SEA/SH risks, and the workers responsibilities; • How the Project will provide information to employees and the communities on how to report cases of SEA & SH to through the Project's Grievance Mechanism. • The process of notifying the EPC Contractor & O&M Company of allegations; and • SEA/SH support groups/service providers to which survivors can be referred to and the corresponding contact details. The plan will also include an Accountability & Response Framework which details how allegations of SEA/SH will be handled, including the investigation procedures and disciplinary actions for violation. It will also include procedures that clearly lay out confidentiality requirements and other safety and ethical principles for dealing with SEA/SH cases.
Gender Based Violence & Harassment (GBVH) Policy	Construction & Operation	The purpose of this policy will be to develop a safe, supportive, non-discriminatory workplace for all employees and create a common awareness and understanding that Gender Based Violence & Harassment, Sexual Exploitation & Abuse and Sexual Harassment have no place in this project. It will aim to create a clear system for reporting, company response and company/legal sanctions for such behaviour.
Security Plan	Construction & Operation	The security plan will be based on a security risk assessment of the reasonably foreseeable security risks (linked with security risks in the Emergency Preparedness and Response Plan), and tailored with the necessary management provisions, staffing requirements, equipment, training and defined processes to implement effective mitigation to manage or prevent these risks. The security plan will ensure applicable alignment to the necessary codes of conduct required by law enforcement under the United Nations principles for Law Enforcement Officers.
Recruitment Plan	Construction & Operation	This plan will provide set of actions for the recruitment of the workforce. The plan will detail the procedure for effective recruitment of local staff (where available), the positions that could be filled by unskilled, semi-skilled and skilled local

Plan / Procedure	Responsibility	Purpose and Key Requirements
		workforce, mechanisms that will be in place to ensure there is non-discrimination of women in assessing recruitment procedures and the training ton be provided for each job role. The plan will also specify how working conditions and terms of employment are compliant with national labour, social security and occupational health and safety laws. The EPC Contractor and O&M Company will ensure that the following documents are prepared prior to the employment of workers. • Employment agreements and recruitment policies; • Equal opportunities and non-discrimination policy (incorporating maternity policies and policies associated with GBVH); and • Child and forced labour policies / procedures (covering recruitment fees and arrangements, as well as document (e.g. passport) retention.
Labour Management Plan	Construction & Operation	This plan will set out responsibilities and management practices associated with the management of labour during construction and operational phase of the Project. It will also ensure that all personnel involved in the construction and operation of the Project EPC, subcontractors and O&M comply with the Project Company's obligations on labour management and in line with national and lenders requirements.
Influx Management Plan	Construction	The EPC Contractor will develop an Influx Management Plan to provide a clear set of actions that will be undertaken for the management and mitigation, monitoring and evaluation of impacts related to worker influx in the Project area.
Local Content Plan	Construction	This plan will clearly identify the Project commitment to purchasing goods and services (where practicable without compromising on the quality and standard requirements for the Project). It will also set expectations with regards to the extent goods and services can be purchased from the local market in order to benefit local businesses without potentially leading to higher prices for local consumers. This plan will be shared with local businesses interested in providing goods and services to the Project.
Supply Chain Management Plan	Construction	The Project Company will develop a Supply Chain Management Plan will include: • The requirement for Project Company's HR policy and procedures and worker Code of Conduct will be applied to all suppliers; • The pre-qualification assessment & process to be undertaken prior to engaging core suppliers (to include review potential supplier/vendor labour issues and risks); • Monitoring/audits to be undertaken to evaluate suppliers' compliance and adequacy of implemented measures, etc.
Contractor Management Plan	Prior to construction	ACWA Power/Project Company will develop the CMP for managing and monitoring the E&S performance of the EPC Contractor and their sub-contractors in line with the E&S commitments.

Plan / Procedure	Responsibility	Purpose and Key Requirements
De-commissioning Plan	De-commissioning	Decommissioning Plan will be developed 12 months prior to decommissioning, and this will include detailed methods for material re-use, recycling and disposal of wastes.
Whistleblowing Policy	Construction & Operation	The Whistleblowing Policy will provide a safe and confidential mechanism for employees and stakeholders to report unethical, illegal, or unsafe practices. It will ensure clear reporting procedures, protection against retaliation, confidentiality of whistleblowers and an impartial process for investigating and addressing concerns.
Land Access Procedure	Prior to construction	The Land Access Procedure defines the process for accessing third-party land during the LNTP phase, ensuring compliance with project and lender requirements. It includes land acquisition guidance, consultation requirements for Project-Affected Persons (PAPs), and the Grievance Redress Mechanism (GRM) for addressing related concerns, amongst other topics.
Permit Register	Construction & Operation	The Permit Register will serve as a tracker to manage all permits required for construction. It will track specific permits that are required and ensure that processes are in place for timely renewals.

8.2.1 Other Recommended Plans and Procedures

Besides the required ESIA plans and procedures stated above, the following plans and procedures are also recommended for development and implementation as part of the ESMS.

Table 8-2 Recommended Plans and Procedures

Plan / Procedure	Project Phase	Purpose and Key Requirements
Site Inspection & Audit Plan & Procedure	Construction & Operation	To specify the timing and frequency of inspections (e.g. daily, weekly walkovers) and audits (including internal & external independent audits for the lenders as appropriate). To detail the methodology of such inspections and audits to ensure Environmental and Social Issues required in Uzbekistan required by project lenders are adequately covered. For internal audits, the procedure should identify the audit scope (site, laydown areas, accommodation areas, sub-contractor areas etc.), audit criteria (e.g. CESMP, OESMP, ESMS), selection process for audit evidence, reporting format and auditor competence requirements. The Procedure should specify definitions of non-conformance, observations and best practices, as well as detailing the mechanisms for issuance and follow up of Non-Conformance reports, including time periods for action and the implementation of corrective and/or preventative measures. The process to engage with the external independent lenders' auditors should also be listed and linked with the SEP as appropriate.
Environmental & Social Training Plan	Construction, Commissioning & Operation	To identify specific staff members for training and the type (i.e. classroom, practical, toolbox talks) how/when this is to be delivered, the frequency of training and whether follow up

Plan / Procedure	Project Phase	Purpose and Key Requirements
		training provisions are required. The training should be linked to the specific content of the listed plans and procedures, or key risk activities that may be identified from on-site method statements.

9 ORGANISATIONAL CAPACITY

9.1 Roles and Responsibilities

The implementation of the ESMS requires competent personnel and sufficient allocation of resources.

9.1.1 Project Company

The Project Company will designate a staff member who will have overall accountability for environmental and social management, compliance and implementation of related Project Company Policies. The Project Company will ensure oversight of the EPC Contractor and O&M Company, including to ensure allocation of sufficient resources in the recruitment of competent personnel and in addressing E&S/HSSE related issues.

9.1.2 EPC Contractor / O&M Company

The Project Company will contractually delegate responsibility for day-to-day elements of environmental & social management and compliance to the EPC Contractor/O&M Company for the respective project phases.

The EPC Contractor and O&M Company will allocate dedicated roles and responsibilities for ESMS implementation to Project staff, as outlined below.

MANAGEMENT TEAM

In order to effectively implement the Project ESMS, management of both the EPC Contractor and O&M Company will need to:

- Fully support the implementation of the E&S Policy and the internally developed ESMS;
- Ensure that the E&S Policy is included/referenced as part of sub-contractor agreements;
- Promote a positive environmental & social culture and good practices by personal example and leadership;
- Review and approve E&S management budgets, resourcing and staffing;
- Ensure resources (human and financial) are allocated appropriately to manage the ESMS;
- Conduct regular (weekly) site inspections that include a specific focus on E&S issues;

- Promote discussion of E&S issues at team meetings; and
- Monitor and report on environmental management and performance.

RESPONSIBLE FOR ENVIRONMENTAL & SOCIAL MANAGEMENT

The EPC Contractor and O&M Company will need to delegate responsibility for implementation of the ESMS and wider environmental and social management and compliance to a full-time member(s) of staff at the Project site.

The staff may be the HSE Manager or the Environmental and Safety Manager, a member of the HSSE Team or a specific Environmental & Safety Officer. Regardless of the 'title' of this role, this person will be the primary project contact beneath the Project Company to implement the ESMS and will report to management, who will further report to the Project Company.

EPC Contractor – E&S Roles & Responsibilities (LNTP and Construction Phase)

Figure 9-1 EPC Contractor Staff Roles and Responsibilities

ROLE	RESPONSIBILITIES
Project Manager	The Project Manager has the sole responsibility of Health, Safety, Environmental and Security (HSE) stewardship of the company. The PM shall lead the project execution team in formulating the best approach to environmental excellence performance. Generally, the Contractor's Project Manager will be responsible for: • Ensure effective implementation, conformance and adoption of the E&S policies, commitments and requirements and communicating the policies to all Project organizations and subcontractors. • All requirements relating to environmental protection including the legal and mandatory regulations of Uzbekistan and expectations; • Approve the project specific CESMP for submission to lenders; • Ensure implementation of the project specific CESMP and associated management plan; • Support and assist the site HSE Team in implementing ESIA, CESMP, and other environmental initiatives related to the Project development; • Assist in the management process of environmental protection and control through environmental safety audits and evaluations; • Develop general environmental protection awareness by promoting meetings and presentations; • Shall be fully responsible for the implementation of all environmental and social contractual requirements at the job site; • Manage environmental incident investigation and reporting; • Develop and ensure the implementation of a project specific Emergency Response Plan • Ensure that the HSE Manager provided adequate training to all site project personnel on environmental, ecological and social requirements. • Attend and lead external and internal environmental audits.

ROLE	RESPONSIBILITIES
E&S Manager	• Ensure that any relevant permits from appropriate regulatory authorities are obtained prior to the commencement of construction works and updated as necessary throughout construction; • Ensure the availability of required resources for the effective implementation of the CESMP and associated management plans; • Responsible for ensuring that this CESMP is established, regularly reviewed and updated, and that the plan remains valid throughout the project construction duration; • Review and analyse environmental performance during the Project as reported by the HSE Manager; • Ensure personnel are competent and have the necessary skills to conduct their functions; • Hold regular coordination meetings with Project Engineers and supervisors to ensure that all tasks and activities are planned, coordinated and carried out safely with adequate labour and resources and without severe environmental impact; • Work with the HSE Department to identify training needs and develop training programmes accordingly; • Stop any unsafe activity which is not compliant with national legislation or project environmental requirements
HSE Manager	The HSE Manager shall be responsible for coordinating and implementing the CESMP. The HSE Manager shall support the Environmental Coordinator to facilitate full compliance in striving for environmental excellence. Generally, the HSE Manager is tasked to: • Understand all requirements relating to environmental protection for legal and mandatory regulations of Uzbekistan, and ensure that they are fully enforced on the project; • Determine the most appropriate method of performing activities and delegation of responsibilities for the Contractor's personnel and Sub-contractors by considering best industry practices on environmental and social safeguard; • Ensure that all foremen and supervisors are aware of the project specific ESIA and CESMP and ACWA HSE work requirements before commencing their work; • Keep Records of all incidents and environmental damage that has occurred at the site; • Keep a record of all weekly environmental safety meetings, toolbox talks and the like on site, complete with subject discussed and a signed list of attendees; • Determine cause of any environmental incident occurrence through incident investigation and recommend measures to prevent recurrences; • Conducts environmental training, toolbox talks and inductions in line with the ESIA and CESMP; • To stop work immediately in case of non-compliance observed and/or there are significant environmental effects including social worker welfare risks and associated incidents; • Maintain an environmental incident register, documenting all incidents of compliance/non-compliance with the and keep the Project Manager appropriately informed;

ROLE	RESPONSIBILITIES
	• Maintain environmental document control, reporting, inductions and training; and • Participates in weekly and monthly environmental meetings, as required.
E&S Coordinator/Assistant	• Prepare environmental induction training and awareness talks. • Conduct environmental training, toolbox talks and inductions in line with ESIA and CESMP. • Undertake regular inspections across the site as required to ensure implementation of project ESIA and CESMP requirements • Keep a record of all weekly environmental safety meetings, toolbox talks and the like on site, complete with the subject discussed and a signed list of attendees. • Inspect the work site daily and correct methods and conditions which may endanger the environment and keep a record daily and report to HSE Manager when necessary; • Record and provide written reports to the HSE Manager of non-conformances or corrective actions with the CESMP; • Has overall responsibility of environmental governance and for implementation of construction contractor's environmental obligations; • Regular liaison with project team to ensure that all required environmental safeguards are being implemented and maintained as defined in CESMP. • Ensuring all corrective and preventative actions identified during inspections and audits are effectively addressed by the project team; • Responsible for preparing weekly toolbox talks on environmental issues for all related staff. • Implementation of the ESIA, CESMP and associated management plans and procedures. • Participate and provide guidance in the regular review of this CESMP and supporting documentation; • Conducts environmental inspections and prepare daily and weekly environmental reports; • Inform Construction Manager and HSE Manager of the need to stop work immediately in case of major non-compliance observed and/or there are significant environmental effects or risks of effects occurring; • Prepare weekly and monthly environmental reports and submit them to the HSE Manager for review and approval. • Review daily, weekly, and monthly checklists and maintaining all records. • Participate in weekly and monthly environmental meetings if arranged by ACWA • Determine cause of any environmental incident occurrence through incident investigation and recommend measures to prevent recurrences. • Maintain environmental document control, reporting, inductions and training;
Ecologist	The EPC Contractor's Site Ecologist will be responsible for the following duties: • Implementing all project E&S policy commitments pertaining to the conservation of biodiversity and ecosystem services.

Role	Responsibilities
	• Continual updates to the legal and permit registers, based on mandatory requirements set out in relevant legislation. • Conducting site walkovers in advance of intrusive earthworks (during early works and main construction), to identify any species and microhabitats of conservation importance or ecological importance (e.g., threatened species requiring search, rescue and translocation, and protection of nesting sites for threatened bird species). • Providing refresher training of the Biodiversity Chance Find Procedure and managing any incidents of chance finds (incidental encounters threatened wildlife), in coordination with local (district and regional) authorities under the Ministry of Ecology. • Reviewing method statements from different task teams to ensure integration with relevant biodiversity safeguards, in advance of intrusive work (e.g., land clearing and grading). • Carrying out routine monitoring of construction sites to ensure early works and construction works are limited to delineated construction zones to minimize vegetation clearance. • Carrying out routine monitoring of early work and construction sites to ensure sanitary and flood buffers/ setbacks for waterbodies are strictly observed. • Carrying out routine monitoring of construction sites to ensure the introduction of any alien and invasive species is eliminated using appropriate physical means. • Carrying out routine monitoring of early works and construction sites to ensure no harm to threatened fauna, due to entrapment in excavations, workers' fear of safety, and hunting. • Carrying out routine monitoring of early works and construction sites to ensure disturbed sites are rehabilitated following completion of construction works, in accordance with the approved Site Rehabilitation Plan. • Conducting pre-clearance nest searches within any on-site habitats in the event that any site preparation and construction works are scheduled for the Spring season (i.e., March to May). • Carrying out watching briefs during land clearance and earthworks in and around habitats potentially suitable for threatened faunal species, for the duration of construction activities. • Identifying biodiversity chance finds (i.e., encounters with threatened faunal species that were not identified during baseline biodiversity surveys within the project sites) and implementing appropriate response measures for confirmed chance finds in coordination with relevant authorities. • Maintaining records of biodiversity chance finds and relevant reporting. • Maintaining records of roadkill and relevant reporting. • Ensuring excavated topsoil is stored separately for back-filling and rehabilitation (and revegetation). • Carrying out inspections to identify biodiversity-related observations and non-conformances, which relate to disturbance of natural habitats and management of biodiversity chance finds.

Role	Responsibilities
	• Record keeping for all site inspections, findings and remedial actions, to ensure timely close-out of biodiversity-related observations and non-conformances. • Supervising the rehabilitation of construction sites during demobilization. • Contribution to regular internal monitoring reports, and wider reporting on biodiversity protection performance in relation to compliance obligations. • Participation in internal and external monitoring (audits) by the Project Company and Lenders' Environmental Advisor (LEA). • Preparation of training materials relating to the avoidance and mitigation of impacts on local biodiversity, biodiversity training plan integrating into a broader E&S Training Plan, and support in the delivery of related training (i.e., i.e., induction and refresher training). • Preparing updated versions of relevant management sub-plans and procedures, based on performance reviews and any Corrective Actions Plans (CAPs), and related documents controls. • Participation in HSES committee/ management meetings in relation to pertinent performance reviews and any emergent significant biodiversity incidents. • Coordination with competent authorities on the management of biodiversity chance finds, and compensatory replanting and relocation for floral species in line with mandatory requirements. Reporting to the EPC Contractor's E&S Manager on biodiversity conservation performance, and the management of significant incidents pertaining to threatened flora and fauna, and ecosystems.
Community Liaison Officer	The EPC Contractor's Community Liaison Officer (CLO) will be responsible for the following duties: • Implementing all project E&S policy commitments pertaining to community health and safety, as well as land access and resettlement planning. • Continual updates to the legal and permit registers, based on mandatory requirements set out in relevant legislation. • Carrying out routine engagement with project-affected communities for the purposes of publicizing updates on the progress of the Project, creating awareness around suitable employment opportunities, sensitizing communities to construction health and safety, and refresher sensitization to the Project's Grievance Redress Mechanism (GRM). • Carrying out regular engagement with the remainder of project stakeholders, including Local Government Authorities and local community leaders, in line with the Stakeholder Engagement Plan (SEP), for the purpose of providing updates on the project implementation and gathering any feedback, concerns and grievances. • Receiving community grievances submitted through grievance forms, phone calls, emails and in-person engagements, managing grievances and concerns via the external GRM, and coordinating remedial action or official feedback on lodged complaints. • Registering all community grievances received using the External Grievance Log, tracking the status of grievance resolution to ensure the closure of complaints in the shortest practicable timeframe (as specified

ROLE	RESPONSIBILITIES
	in the SEP), and documenting the closure of grievances upon receipt of positive feedback from aggrieved parties. • Coordinating with the designated Environmental Engineer/ Supervisor and HSE Engineer/ Supervisor on the resolution of community grievances relating to waste management, noise emissions, air pollution, property damage, and traffic congestion. • Coordinating with the designated HR Manager for disclosure of accessible project employment opportunities within project-affected communities and marginalized community groupings in particular (i.e., women, youth, disabled etc.), and delivering guidance procedures for job applications to the communities. • Coordinating with local authorities and relevant departments within the EPC Contractor's organization to manage grievances related to labour influx, such as increased morbidity due to a radical shift in the prevalence of communicable diseases (attributed to labour influx), disruption of productive activities due to various project activities, encroachment of private property and resultant property damage, and adverse influence on local customs and intangible cultural heritage. • Contribution to regular internal monitoring reports, and wider reporting on social performance in relation to compliance obligations. • Participation in external monitoring (audits) by the Project Company and Lenders' Environmental Advisor (LEA). • Preparation of internal training materials relating to the avoidance and mitigation of impacts on community health and safety, livelihoods and social services, social training plan integrating into a broader E&S Training Plan, and support in the delivery of related training (i.e., i.e., induction and refresher training). • Preparation of training and communication materials for engagements with local communities (i.e., construction H&S awareness, GRM, employment). • Maintaining records of all stakeholder engagements, including engagements with local communities. • Preparing updated versions of relevant management sub-plans including the Stakeholder Engagement Plan, based on performance reviews and any Corrective Actions Plans (CAPs), and related documents controls. • Participation in HSES committee/ management meetings in relation to pertinent performance reviews and any emergent significant social and community H&S incidents. • Coordination with the H&S Engineer, other designated internal specialists (e.g., EPC Contractor's medical team) local authorities on the investigation of significant H&S incidents (e.g., injuries and/or fatal accident or Gender Based Violence crime) involving third parties (i.e., members of local communities/ public) and significant social incidents (e.g., community strikes/ protests). • Provision of follow-up information to project-affected communities with regard to any significant H&S and social incidents involving community members. • Ad-hoc support to the delivery of any community development programs launched by the Project Developer/ Company, in collaboration with the Project Company's Social Expert.

ROLE	RESPONSIBILITIES
	• Reporting to the EPC Contractor's E&S Manager on the progress and outcomes of continual stakeholder engagement, and the management of all grievances and significant incidents pertaining to local communities, livelihoods and social infrastructure.
Human Resource Specialist	The EPC Contractor's HR Specialist will be responsible for the following duties: • Implementing all project E&S policy commitments pertaining to labour, gender equality, and the protection of human rights in relation to employment and working conditions. • Continual updates to the legal and permit registers, based on mandatory requirements set out in relevant legislation. • Engaging in the recruitment of qualified job candidates on the basis of inherent and non-discriminatory qualification criteria, with special attention to inclusion of candidates from local communities and women. • Ensuring the establishment of comprehensive, translated and mutually available employment contract agreements for all workers, in line with mandatory requirements and lenders' compliance obligations. • Ensuring timely payment of remuneration for all workers, including social security deposits. • Communicating the internal (workers') Grievance Redress Mechanism (GRM) to all directly contracted project workers, through induction training and refresher training. • Receiving worker grievances submitted through grievance forms, phone calls, emails and in-person engagements, managing grievances and concerns via the internal GRM, and coordinating remedial action or official feedback on lodged complaints. • Registering any labour-related legal claims lodged by workers, and arranging for arbitration and/or legal proceedings, in collaboration with designated legal personnel under the EPC Contractor. • Registering all worker grievances received using the internal grievance log, tracking the status of grievance resolution to ensure the closure of complaints in the shortest practicable timeframe (as specified in the SEP), and documenting the closure of grievances upon receipt of positive feedback from aggrieved parties. • Mediating any conflicts between workers. • Conducting procedural investigation into violations of the Project's Code of Conduct (including Gender-Based Violence and harassment) and sanctioning disciplinary and penal action in coordination with relevant management units/ committees. • Engaging relevant authorities in any gross misconduct constituting unlawful offences, for official investigation and prosecution as appropriate. • Participating in initiatory and subsequent internal audits for any centralized accommodation facilities dedicated to construction labour, to ensure housing and welfare conditions are in line with the IFC and EBRD standards for labour accommodation. • Engaging in pre-qualification screening and appointment of EPC sub-contractors with regard to performance on key E&S criteria and standards enshrined in the Project's E&S policies, and management plans and procedures (i.e., track record in E&S performance, organizational capacity for E&S risk management).

ROLE	RESPONSIBILITIES
	• Managing pre-qualification screening and appointment of independent recruitment agencies with regard to performance on key labour risk management criteria and standards enshrined in the Project's E&S policies, and management plans and procedures (i.e., track record in ethical and equitable recruitment, any implication in past human rights violations etc). • Incorporating E&S compliance obligations into contractual agreements with sub-contractors engaged for Project's primary activities. • Conducting regular internal audits on EPC sub-contractors and any engaged recruitment agencies, to ensure compliance with requirements related to the Project's Human resource, Human Rights policies and Code of Conduct (CoC), including management systems and safeguards for occupational health and safety, fair and equitable recruitment and employment terms, protection of workers' rights, and prohibition of forced and child labour. • Supporting the implementation of the Project's Supply Chain Management Plan (SCMP). • Conducting vetting (i.e., background checks) for security personnel hired for the project, to ensure recruits have no past implication in workplace incidents involving excessive use of force, and any other form of human rights violation. • Contribution to regular internal monitoring reports, and wider reporting on performance in labour rights, in relation to compliance obligations. • Participation in external monitoring (audits) by the Project Company and Lenders' Environmental Advisor (LEA). • Preparation of training materials relating to the avoidance and mitigation of labour risks and impacts, labour training plan integrating into a broader E&S Training Plan, and support in the delivery of related training (i.e., i.e., induction and refresher training). • Preparing updated versions of relevant management sub-plans and procedures, based on performance reviews and any Corrective Actions Plans (CAPs), and related documents controls. • Participation in HSES committee/ management meetings in relation to pertinent performance reviews and any emergent significant environmental incidents. • Coordination with competent authorities on registration of employees and social security payments.
Security Supervisor	The EPC Contractor's Security Supervisor will be responsible for the following duties: • Implementing all project E&S policy commitments pertaining to occupational health, safety and security, and human rights. • Ensuring the security of all project sites through the implementation of access controls at security checkpoints (i.e., entry gates), site-wide security patrols and CCTV surveillance as appropriate. • Responding to any security incidents within the project sites, in close coordination with local authorities (i.e., local police force) and security personnel stationed at the Project site), to ensure the safety of project workers, and security of project assets. • Aiding official investigation into any security incidents resulting in intrusion, theft and/or property damage, without notice and apprehension.

Role	Responsibilities
	• Maintaining a record of all security incidents and related response and investigation procedures. • Contribution to regular internal monitoring reports, with regard to the occurrence and management of security incidents, and any reported/ observed human rights abuses by the Project's security personnel. • Preparation of training materials relating to site security and the proportionate use of force, a security training plan integrating into a broader E&S Training Plan, and support in the delivery of related training (i.e., i.e., induction and refresher training). • Preparing updated versions of relevant management sub-plans and procedures, based on performance reviews, and related documents controls. • Participation in HSES committee/ management meetings in relation to pertinent performance reviews and any emergent significant security incidents.
Sub-contractors	• Implement the project environmental requirements included by the EPC contractor in the sub-contractors agreement; • All sub-contractors are required to work in accordance with the approved CESMP; • All sub-contractors are required to attend Project and/or site inductions where the requirements and obligations of the ESIA and CESMP are communicated. A record of all subcontractors inducted will be maintained as part of the Project induction and training register; • Sub-contractors, at a minimum, shall ensure that before commencing work that they are fully aware of the provisions applicable to their scope of work and in reference to the following: o Contractor's approved project specific CESMP & HSE Plans and Program; o Understand and comply with all relevant environmental requirements applicable to their scope of work; and o Ensure that all their personnel have the necessary skills, training and qualifications and experience to properly execute their contract scope of work within the provisions of the approved project specific CESMP.

In the event of a chance find of archaeology, this will initially be checked by the Ecologist and E&S Manager. Further, an Archaeologist from the Institute of Archaeology of Uzbekistan will be engaged by the CLO in line with the Chance Finds Procedure.

O&M Company – Roles & Responsibilities (Operations Phase)

It is noted that specific roles and responsibilities for the O&M Company have not been fully defined at this time. It is recommended that the following key roles and responsibilities are covered by the main E&S staff implementing the ESMS duing operations.

HSSE / E&S Manager (or commensurate position)

- Fully support the implementation of the E&S Policy;

- Engage with the project management regularly in regard to E&S issues, risks and compliance management;
- Oversee and ensure execution of the environmental and social management programmes by other project parties (such as sub-contractors and key suppliers);
- Monitor the Project to ensure environmental and social compliance (including for sub-contractors - as per the scope of the ESMS);
- Advise management on matters pertaining to the environmental and/or social elements;
- Investigate environmental and social issues, incidents and non-conformances, implement corrective actions and report those to the management/relevant authorities;
- Maintain applicable environmental and social records as required by the ESMS (e.g. incident registers, NCR reports, corrective action reports, grievance register etc.);
- Ensure monitoring programmes are implemented by qualified personnel and report the results to the Project management for review and as a basis for continuous improvement;
- Display and monitor site bulletin boards to ensure they remain 'live' and 'up-to-date' with relevant environmental & social information;
- Coordinate, plan, formulate and/or deliver environmental and social induction training to all project personnel (including subcontractors) as well as regular toolbox talk environmental training sessions;
- Organise programmes and activities to promote environmentally responsible conduct in the prevention of injury, ill health and environmental impact throughout the workforce;
- Stop any unsafe activity which is not compliant with environmental legislation or lender requirements, and correct such work practice and/or conditions before allowing work to resume/commence;
- Act as point of contact for any sub-contractor with regard to environmental issues;
- Ensure that each sub-contractor is aware, compliant and implementing the requirements of the ESMPs;
- Review subcontractor's personnel, qualifications, competency and environmental performance; and
- Undertake regular internal ESMS audits to assess compliance and implement corrective & preventative actions – audits are to include all sub-contractors at the project.

9.2 Environmental & Social Awareness and Training

E&S implementation will not be effective unless the project workforce are aware of their specific responsibilities with regard to environmental protection and social safeguarding. It is therefore necessary for the EPC Contractor/O&M Company to ensure that the workforce are trained appropriately according to the relevant elements of the project ESMS.

Tailored training requirements relevant to elements of works will need to be developed and defined as part of the ESMS (e.g. personnel associated with waste management should require training on relevant components of the waste management plan).

9.2.1 Type of Training Sessions

The EPC Contractor/O&M Company (and as applicable, the sub-contractors) will deliver applicable elements of E&S training within:

- Induction Training
- To the entire workforce, to include key environmental and social components linked to the E&S Policy and developed ESMS; that are applicable to all employees.
- Tool-Box Talks
- Environmental & Social tool-box talk training sessions on regular basis to remind workers of E&S considerations when undertaking normal day-to-day activities; and
- Specific training sessions on ESMS and E&S Management Plans
- To ensure staff are competent to implement the ESMS, or undertake activities that may have inherent E&S risks or potential impacts to receptors. All staff with specific responsibilities and with authority to implement mitigation measures and monitoring/audit commitments should be trained in regard to such plans/procedures.

9.2.2 Planning of Training

In order to record identified training needs, the EPC Contractor/O&M Company will develop and maintain a project environmental training matrix (falling under wider HSE training) to identify the training type and frequency required for each staff role.

A training plan/programme will also be prepared to set out the frequency of training requirements.

All training material will be prepared in advance and documented. It will be prepared in English language and applicable local languages or those languages that apply to the engaged workforce. Where necessary translators may be required for specific sessions.

9.2.3 Content of Training Sessions

INDUCTION TRAINING

During project inductions, all project workforce and visitors will receive an element of Environmental and Social induction classroom training, which as a minimum will include an overview of:

- E&S Policy;
- Labour Management;
- Contact details for the EPC Contractor/O&M Company E&S Manager and E&S Engineer;
- Main topics of E&S risk/impact (which will include noise);
- Environmental incident response and internal reporting requirements including who shall be contacted in the instance of an incident;
- Duty of care, highlighting that all staff have a responsibility to carry out their duties in accordance with the E&S Policy and related ESMS and to report any and all environmental incidents.

The induction shall make it clear that interference with any wildlife or archaeological remains shall be strictly prohibited. The training session will also highlight the importance of maintaining environmental & social awareness; the seriousness of environmental & social requirements and that compliance is a condition of employment.

TOOLBOX TALK ENVIRONMENTAL & SOCIAL TRAINING SESSIONS

This will be varied depending on the risks, impacts, opportunities and compliance related to specific activities by construction/operational teams, but may include the following (provided as examples):

- Air quality emissions and control measures for vehicles, plant and equipment drivers/operators;
- Dust control and dust mitigation techniques for heavy vehicles' drivers and dust generating equipment operators;
- Erosion and sediment control for operators of earth moving equipment;

- Hazardous materials handling including handling, transportation and storage of hazardous materials as well as maintenance and refuelling of vehicles and machinery;
- Spill prevention and response for personnel involved in the storage of fuel and other hazardous materials;
- Ecologically significant fauna and mitigation measures for all construction personnel. This includes the actions to be implemented in case of trapped or injured fauna etc.
- Noise control and mitigation measures for vehicles, plant and equipment drivers/operators;
- Traffic control and mitigation techniques for vehicle drivers (e.g. cars, buses, heavy goods vehicles, etc.);
- Waste management and chemicals and hazardous materials management, including transportation and disposal for all construction personnel;
- Emergency management and incident response for all construction personnel;
- Grievance procedure including methods to submit a complaint, review and response period; and
- Gender Based Violence & Harassment (GBVH) including Sexual Exploitation & Abuse (SEA) reporting system and company/legal sanctions for such behaviour.

SPECIFIC TRAINING SESSIONS ON ESMS AND E&S MANAGEMENT PLANS

Training sessions on the ESMS or specific activities or plans/procedures will need to be tailored and delivered to staff based on their specific content and key considerations. As a minimum, training will be provided for the following management plans/procedures due to the specific risks associated with these aspects:

- All ecological plans & procedures;
- Archaeological Chance Find Procedure;
- SEA & SH Prevention & Response Action Plan; and
- Gender Based Violence & Harassment Policy.

9.2.4 Training Records

Further to the training being undertaken the environmental training records will identify as a minimum:

- Description and purpose of training;

- Date and location;
- Trainer and attendees (with attendance signatures);
- Photos or other documents as attachments to evidence the training.

A consolidated record of training undertaken by all workers will be maintained and will be comparable against the training matrix.

10 INSPECTION AND AUDIT

Monitoring of internal risks and compliance will be undertaken via site-based inspections and Project specific audits (vs. compliance obligations). Such processes are integral requirement of any management system and should be considered as a continual process to ensure the successful implementation of the ESMS.

10.1 Inspections

Various parties and project roles have responsibilities relating to inspection. Inspections will occur on an ongoing basis for the duration of the project lifetime. This will include the following:

- On-going observations made in Project areas that relate to E&S/HSSE risks, impacts and compliance.
- Such observations can be made by any Project worker, but are expected to be made mostly by the dedicated E&S/HSSE roles who have specific responsibilities and expertise to identify and manage such items. This includes HSE Officers present in working areas.
- Formal inspections made via:
- Management walkdowns;
- E&S/HSSE team walkdowns;
- Periodic inspections of certain areas of the site and temporary facilities.

10.2 Internal Audits

The ESMS will establish, implement and maintain an internal audit programme that identifies the frequency, methods, responsibilities, planning requirements and reporting of audits.

The internal audits will be undertaken on a quarterly basis during the construction/commissioning phase and annually during the operational phase.

When undertaking internal audits the following will need to be established:

- Define the scope, audit criteria and the objectives of each audit;
- Select audit staff competent in the audit process and subject matter; and
- Ensure that audit results are reported to relevant senior management.

All internal audit will be documented as formal reports. Where observations and non-conformances are identified these will be recorded and corrective actions undertaken (as outlined in the following section).

10.3 ACWA Power Corporate Audits

It is expected that the ACWA Power corporate HSSE team will audit the Project's management system on an annual basis as a minimum.

10.4 Lenders Monitoring and Reporting

Monitoring is necessary for the lenders and is expected to be undertaken and reported by a competent independent third-party.

The requirements for such monitoring and reporting will be agreed with the lenders in the Project ESAP.

These reports are likely to be based upon site visits to evaluate the implementation of both the ESAP (a covenant to the loan), compliance with applicable E&S standards and the suitability & effective of the established ESMS in practice.

11 OBSERVATIONS, NON-CONFORMITY AND CORRECTIVE ACTION

11.1 Observations

The majority of observations made during inspections are expected to be corrected quickly and easily by the respective responsible parties. Documentation will not specifically be recorded in regard to such observations, although there may well be a record of communication in this regard.

Where observations are more significant or cannot be corrected immediately, these will need to be added to a formal tracking system, such as the Synergy Life system implemented by ACWA Power, or other systematic process, that will enable tracking of finding status and corrective action. It is necessary to include such findings on formal checking systems to ensure that effective corrective actions are taken.

11.2 Non-Conformances

Non-conformances are instances where Project compliance obligations (such as a legal requirement, or ESMS requirement) are not being fulfilled, or cannot be evidenced. Non-conformances will be issued in relation to:

- A breach of an E&S contractual obligations;
- A failure to comply with a Project E&S policy, or related E&S requirement/obligation (including E&S management plans);

Examples of non-conformity include, but are not limited to:

- Commencement of works without ensuring pre-clearance processes are undertaken in relation to PAP compensation, ecological surveys (and any required species translocations);
- Commencement of works without a permit, an approved risk assessment and method statement that covers environmental issues identified herein;
- No review of risk assessment and method statements following any significant changes in requirements that could adversely impact the environment;
- Appointment of a waste transport/disposal service provider that is not appropriately licensed;
- Failure to comply with waste storage/disposal requirements as identified by risk assessment and/or method statement;

- Failure to comply with chemical storage and/or handling requirements;
- Un-containable or uncontrollable spills of fuels or chemicals;
- Undertaken works outside the scope defined within the risk assessment and method statement; and,
- Discharge of untreated, contaminated waste water to the environment.

All non-conformances identified during audits, inspections and monitoring activities will be recorded and followed up as non-conformity. Each non-conformance will be recorded utilising a developed reporting process. All non-conformances and near misses shall include the following information:

- Location and description of the non-conformance and the criteria/requirement that has been breached;
- The proposed corrective action including who holds responsibility for undertaking this action;
- The proposed preventative action to ensure against reoccurrence of the noncompliance;
- Any required monitoring and follow up; and
- Key performance indicators and a deadline for the successful completion of the corrective and preventive action.

The Project Company shall be made aware of all identified non-conformances immediately.

11.3 Corrective Action

Any situation or condition that is non-conforming or otherwise poses an imminent risk to the environment, or social welfare should be immediately resolved. If a situation or condition cannot be corrected immediately, temporary measures such as necessary for the protection of the environment should be implemented.

All formally recorded observations and non-conformance will require corrective actions to be undertaken. Where non-conformances are raised, a corrective action plan will be developed by the respective non-conforming party. The corrective action plan shall include determination of root cause, proposed corrective actions (to correct the situation and prevent reoccurrence), timelines, required resources and any changes needed to ESMS documentation. The corrective action plan should be approved by the E&S Manager.

Records of implemented corrective actions shall be maintained.

12 EMERGENCY PREPAREDNESS AND RESPONSE

The likelihood of an E&S emergency or incident can be minimised by effective risk management planning and development of applicable response plans as part of an ESMS.

All risk assessments and method statements will need to include consideration of the potential for environmental incidents. Suitable incident response equipment should be maintained at appropriate locations on site and Project staff be suitably trained to use such equipment and respond to such emergencies.

It is expected that the EPC Contractor and O&M Company will prepare and implement an Emergency Preparedness and Response Plan respective to construction and operations.

Note: *All reference to specific emergency response plans and procedures shall be made to the dedicated standalone Project 'Emergency Preparedness and Response Plan'.*

The plan will identify procedures for reasonably foreseeable emergency situations that may relate to the Project. This will include drills at the Project site and any relevant training to specifically involved personnel, as well as use of required equipment for such circumstances. The plan will include site-based actions to take, requirements for co-ordination with the applicable external agencies (i.e. emergency services), as well asl impacted stakeholders and statutory authorities in the instance that a pollution incident occurs.

When establishing the Emergency Preparedness and Response Plan, the following should be considered:

- What emergency situations are reasonably foreseeable related to the project type and project phase under consideration.
- The most appropriate method for responding to an emergency situation;
- Internal and external communication processes;
- The action required to prevent or mitigate environmental & social impacts;
- The need for post-emergency evaluation to determine and implement corrective and preventative actions;
- Periodic testing of planned emergency response actions and required equipment;
- Training on emergency response and emergency equipment use;
- A list of key personnel and emergency services, including contact details (such as fire department, spillage clean-up services);
- Evacuations routes and assembly points; and

- The possibility of the need for mutual assistance from neighbouring organisations/projects.

12.1 Incidents

Incident investigation and analysis will need to be undertaken in co-ordination with the provision of Element 10 established in the ACWA Power HSSE Management System Framework. In summary, this requires clear processes for incident reporting, response, investigation, analysis, follow up and documentation.

13 STAKEHOLDER ENGAGEMENT

13.1 Stakeholder Engagement Overview

Stakeholder engagement can be described as a systematic effort to understand and involve stakeholders and their concerns in the Project activities and decision-making processes. Stakeholders are defined as any group or individual who can affect, or can be affected by, the Project.

The main objectives for stakeholder engagement are:

- To inform the relevant stakeholders about the Project;
- To capture views and concerns of the relevant stakeholders with regard to the project;
- To enhance ownership of the project within the host community;
- To provide a basis for stakeholder participation in impact identification and mitigation.

Consultation is not a single conversation but a series of opportunities to create understanding about the Project among those that are likely to be affected or might have an interest in it, and to learn how these stakeholders view the project and its related risks, impacts, opportunities, and mitigation measures. Listening to stakeholder concerns and feedback can be a valuable source of information to help identify environmental and social risks (real and perceived) and improve project management.

13.2 Stakeholder Engagement Plan (SEP)

A standalone SEP has been prepared, which will be implemented by the Project Company during construction and operations. This should be implemented by the Project Company as the project owner and main public face of the Project, however, certain elements may be delegated to other project parties such as the EPC Contractor and O&M Company.

As a live document this will need to be updated as and when is necessary to ensure the document remains valid with respect to the Project and the applicable stakeholders. The SEP includes a suitable grievance mechanism to allow local community complaints to be raised in a clear process.

Note: *All processes relating to Stakeholder Engagement should refer to the Project Specific SEP.*

13.3 Grievance Mechanism

Note: *All processes relating to Grievance Redress should refer to the Project Specific SEP.*

13.3.1 Worker Grievances

The SEP includes a grievance procedure for workers to raise workplace concerns. The procedure includes an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism allows for anonymous complaints to be raised and addressed.

The grievance mechanism must not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.

All staff will need to be informed of the grievance procedure during their induction to the project and the procedure will be made readily available and easily accessible.

13.3.2 External-Party Grievances

The SEP also includes a procedure for external party grievances that establishes methods to receive and register communications (e.g. form Project Affected and Interest based stakeholders). This includes:

- A method to screen and assess the issues raised and determine how to address them;
- A method to provide, track, and document responses, if any; and
- A method to adjust the ESMS management program, as appropriate, in response to external grievances.

The grievance procedure shall be reviewed and updated (as applicable) to ensure it remains scaled to the risks and adverse impacts of the project and include consideration of any affected stakeholders.

It must seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies.

14 COMMUNICATION

The ESMS' will establish, implement and maintain processes needed for internal and external communication relevant to environmental and social performance of the Project, relevant to the phase of the project and the allocated responsibilities.

Lines of communication relevant to the construction phase will be clearly defined within the CESMP (and LNTP CESMP) whilst lines of communication relevant to the operational phase will be clearly defined within the OESMP.

Associated processes will establish:

- What will be communicated;
- When it will be communicated;
- With whom to communicate;
- How to communicate; and
- By whom.

When establishing communication processes relevant to the ESMS, particular note will be made to

- Compliance obligations, including any reporting requirements to the environmental regulatory authorities; and
- Reporting requirements required by the Project lenders (i.e. as per ESAP or facility agreement).

15 DATA MANAGEMENT AND RECORD KEEPING

The implementation of the ESMS will generate data, that will be required to be managed. The appropriate management of records is a requirement of any successful ESMS and can be used to track progress, review effectiveness and demonstrate compliance.

The ESMS relevant to both the construction and operational phases should include the collation of the records including (but not limited to) the following:

- Environmental and Social Induction and training records;
- Relevant records of competence/qualifications of E&S/HSSE staff;
- Records related to the implementation of specific management plans, such as the SEP, GRM, LALRP etc.
  - Grievance register and grievance records;
  - Site observations record and tracker;
  - Internal Audits reports;
  - Third-party Environmental & Social Audit Reports;
- Non-Conformance Reports (including corrective action reports);
- Incident & Incident Investigation Reports;
  - Environmental & Social Monitoring Results;
  - Waste & Wastewater Management Company Licenses;
  - Waste & Wastewater Manifest Forms and Chain of Custodies;
  - Environmental & Social Risk Assessments and Method statements;
  - Equipment Inspections/Certifications (such as calibration certificates);
  - Record of emergency events.

Such records will need to be included in an ESMS register and updated as applicable.

16 ESMS REVIEW

Project ESMS documentation will be 'living' and will need to be reviewed and updated in relation to changes in project circumstances, activities, environmental sensitivities and future requirements.

Examples of changes in project circumstances that may necessitate ESMS review and revisions include:

- Project design changes, modifications, expansions;
- New E&S regulation or standards that apply to the Project;
- New/renewal permit conditions/conclusions of the national and local regulatory authorities;
- Updates to Project Lender requirements that apply to the financing agreement, or Project ESAP updates;
- Changes in construction methods, commissioning or operational activities, which may change the type and level of impact on new or existing receptors and hence may necessitate an adaptive mitigation/management approach;
- Identification of new sensitivities in the Projects Area of Influence (AOI), requiring new or adaptive mitigation/management; and
- Corrective actions that are undertaken in response to results from monitoring, audits and inspection, which may require updates to ESMS documentation.

As a minimum, the ESMS will be reviewed on an annual basis (i.e. once a year) to ensure applicability to the risks, impacts and compliance obligations relating to the specific project stage. It is expected that where audit or incident corrective actions result in required updates, these will be made as and when they are identified.

ANNEX A – NATIONAL EIA CONCLUSIONS (WIND FARM AND OHTL COMPONENTS)

MINISTRY OF ECOLOGY, ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE OF THE REPUBLIC OF UZBEKISTAN
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- STATE ENVIRONMENTAL EXPERTISE
- EXPERT CONCLUSION

NUMBER: 01-02/01-835
DOCUMENT TYPE: Draft Environmental Impact Statement

Issued to the Client of the State Environmental Expertise: JURU ENERGY CONSULTING LLC
TIN: 303454532
Subject name: Environmental impact assessment for the project: "Construction of the 200 MW NUKUS-II wind power station (WPP) in the Beruniy district of the Republic of Karakalpakstan" (Draft Environmental Impact Statement)
Name of the project developer: JURU ENERGY CONSULTING LLC
TIN: 303454532
Responsible expert of the State Environmental expertise: DUROVA TAMARA TIMOFEYEVNA

According to Attachment 1, approved by Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 541 dd. September 7, 2020, **this subject of the State Environmental expertise qualifies for p.29 of** Category 2 **of environmental impact.**

Result of the State Environmental expertise: Positive conclusion

The state environmental expertise conclusion: This document is not considered legal without the accompanying attachment

Issue date: 27.05.2024
Validity period: 27.05.2027

The attached expert conclusion of the State Environmental expertise Center of the Ministry of ecology, environmental protection and climate change of the Republic of Uzbekistan and its branches on compliance of the subject of environmental expertise with ecological requirements, coordinates of location points, environment protection measures, requirements that must be fulfilled, etc. is ***an integral part of this conclusion of the State Environmental expertise and it is mandatory to fulfill requirements specified therein.***

Note: If the Client does not comply with environmental requirements stipulated in the conclusion of the State Environmental expertise, the conclusion of the State Environmental expertise shall be canceled in accordance with the procedure established by the laws.

General Director **G. Mukhamedov**

Attachment to the conclusion

of the State Environmental Expertise

dd. May 27, 2024 No. 01-02/01-835

Requirements of the expert conclusion on results of the state environmental expertise

JURU ENERGY CONSULTING LLC to:

- before the facility is put into operation, develop the final stage of the EIA process - the Statement on Environmental Effects (SEE), and submit it for the state environmental expertise as required by law;

- in the SEE materials, include the Enterprise Inspection Report, approved by the Ministry of Ecology and Environmental Protection of the Republic of Karakalpakstan, detailing implementation of environmental measures and project designs outlined in the draft EIS;

- in accordance with the Law of the Republic of Uzbekistan "On Protection and Use of Wildlife" (p. 11, 30, 31, and 35), develop, approve, and agree upon with the Regional Inspectorate for Control over Protection and Use of Biodiversity and Protected Natural Areas, measures to ensure preservation of migration routes, habitats, and breeding places of birds before the start of construction. This includes registering Red List species of animals and plants and implementing measures for their conservation;

- ensure adherence to requirements of p. 5 of Decree of the President of the Republic of Uzbekistan No. 4845 dd. September 29, 2020 "On measures to further improve the activity management in the field of household and construction waste management", and Decree of the Cabinet of Ministers No. 40 dd. January 28, 2021, "On measures to further improve the procedure for carrying out works with construction waste" (Attachments 3-7);

- prepare and submit relevant agreements for removal of waste and sewage from their accumulation sites within a specified timeframe;

- make appropriate arrangements for disposal of wind generator blades;

- ensure reclamation of disturbed soil and vegetation cover, as well as temporary roads, upon completion of construction works;

- implement recommendations of the draft EIS to minimize adverse environmental impact of the facility during the construction phase;

- ensure treatment of household wastewater generated during the WPP operation at the bioseptic installation, and subsequently use the treated wastewater for irrigating the area and green spaces;

- ensure implementation of the Environmental Management Plan (EMP), the Environmental Monitoring Plan, and measures to mitigate adverse environmental impacts during both construction and operation phases of the WPP, as outlined in the draft EIS;

- take into consideration that when designing construction of new buildings and structures exceeding a height of 12 meters from the ground level and/or with a total area exceeding 500 square meters, an area for landscaping (trees, shrubs, and other plants) in adjacent territories must not be less than 25 percent of the total land area;

- establish "green belts" on both its own and adjacent territories (Basis: Decree of the President of the Republic of Uzbekistan dd. May 31, 2023, No. UP81 “On measures to transform the sphere of ecology and environmental protection and organize activities of the authorized state body,” p. 13e).

The Ministry of Ecology, Environmental Protection, and Climate Change of the Republic of Karakalpakstan to ensure control over the following aspects:

- compliance with environmental legislation during construction of the wind power plant.

- implementation of recommended organizational and technical environmental measures aimed at minimizing the adverse environmental impact of the proposed facility during its construction, as outlined in the draft Environmental Impact Statement (EIS) and Environmental Management Plan (EMP), as well as the requirements specified in this conclusion.

Do not allow start-up of the facility without a positive conclusion from the State Environmental Expertise for regarding the Statement of Environmental Effects.

Responsible expert: DUROVA TAMARA TIMOFEYEVNA

Summary of the facility

To: Ismailov J.Sh.

Director of JURU ENERGY CONSULTING LLC

copy: Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Karakalpakstan

Materials for the initial stage of environmental impact assessment have been submitted for the "Construction of the 200 MW NUKUS-II wind power station (WPP) in the Beruniyy district of the Republic of Karakalpakstan" project.

ACWA Power is implementing the project, initiated under a Public-Private Partnership Agreement signed on March 28, 2024, alongside other regulatory documents.

The project aims to supply electricity to Uzbekistan's grid from the proposed NUKUS-II WPP, utilizing wind energy from an area with substantial wind potential.

The project site location is designated by the Government of the Republic of Uzbekistan.

The chosen site for the NUKUS-II wind farm is on the Sultan Uwaiz plateau's mountain range, where wind generators are positioned at the highest points of rocky ridge of the mountain range. The height difference from south to north is from 144 m to 387 m, and further to the north there is a descent to desert lands at a level of 240 m, above sea level.

The designated site for the wind farm construction is situated on the undeveloped land with high wind potential, devoid of buildings, structures, and infrastructure.

The land at the project site is uncultivated rocky terrain without any woody vegetation.

The allocated area for the NUKUS-II 200 MW WPP construction spans 6502.0 hectares, with open lands bordering the northern, western, and eastern sides. To the south, there is a mountain range, followed by the sacred pilgrimage site of Mount Munajat (located 2.6 km from the outermost wind generator), and the Sultan Uwais Ziraat sanctuary (located 5.6 km from the outermost wind generator).

There are no surface watercourses around the wind farm.

The Amu Darya River, the area's principal waterway, flows 20 kilometers south of the WPP site.

The draft EIS contains sufficient information on the climatic characteristics of the project area, as well as existing sources of environmental impact. The analysis revealed that the wind farm construction site is located in an area with an acceptable environmental situation in terms of atmospheric air, surface and groundwater, soils, and vegetation.

Attached to the draft EIS is the Biodiversity Experts' Conclusion on the results of biodiversity surveys conducted by experts from Juru in the project area of the 200 MW Nukus-II WPP in the Beruniy District of the Republic of Karakalpakstan and the 44.3 km-long 220 kV Double Circuit OHL in the Beruniy district of the Republic of Karakalpakstan" (JV5 JEC-OLJ T – 24-414 dd. 30.04.2024). The project area was surveyed in March and April 2024 by specialists in botany, herpetology, ornithology and theriology, and biodiversity.

The survey's findings revealed the presence of uncommon species listed in both national and international Red Lists, including the saker falcon (Falco cherrug), goitered gazelle (Gazella subgutturosa), and Russian tortoise (Testudo horsfieldi), as well as species under national protection, such as the golden eagle (Aquila cfaysaetus), corsac fox (Vvlpes corsac), and Brandt's hedgehog (Paraechinus hypomelas), with the conclusion that measures will be taken within the scope of the Project to decrease risks and conserve these species.

The southern side of the region, relative to the WPP, is characterized by a high concentration of infrastructure, residential communities, and farming.

A railway line is located 9.0 kilometers south of WPP's boundary, followed by the A-380 highway at a distance of 9.5 km, which is the area's primary transportation artery.

Lower Amudarya State Reserve, a protected zone, is located 16.0 kilometers southwest of the WPP.

The nearest residential buildings in Kyzylkala are 8.0 km away from the territory under consideration, which corresponds to the Sanitary protection zone established by the Republic of Uzbekistan's Service for Sanitary-Epidemiological Welfare and Public Health for the proposed WPP, the width of which is determined to be 250 m (a letter from the SEWPH is attached to the draft EIS).

The draft EIS includes the Certificates of public hearings held by the chairmen with the participation of residents of five makhallas (Makhtumkuli, Naiman, Dustlik, Abay, and Kyzyl Kala), during which implementation of the proposed project and environment impact of its activities were discussed, and for which the residents voiced their support.

The draft EIS is accompanied by the Protocol of the Public Hearing dd. April 24, 2024, conducted by the khokimiyat of the Beruniy district of the Republic of Karakalpakstan with the participation of representatives of stakeholders: chairmen and residents of the Magtymguly, Naiman, Dustlik, Abay, Kyzyl Kala mahallas; Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Kapakalpakstan; sanitary-epidemiological welfare and public health services; JURU ENERGY CONSULTING LLC and other stakeholders.

Based on results of the Public Hearing, a decision was made on public support for the planned activities of ACWAPower sideSolar LLC in the territory in question.

The proposed wind power plant is the most promising in the energy industry and varies from standard thermal power plants in that it does not consume hydrocarbon raw materials, is highly efficient, and has a relatively low environmental effect.

This project provides for construction of the 200 WPP, which will include 29 wind generators as well as all supporting structures and facilities. Based on the draft EIS, the WPP is expected to take one year to construct.

The WPP equipment that converts wind energy into electrical energy includes: a turbine (rotor) that converts the energy of a wind flow of rectilinear motion; a generator that converts mechanical energy into electrical energy; a mast; a turbine control system; a multiplier; a root or azimuth drive system; a rectifier, required when using alternating current generators.

The draft EIS provides sufficient information on the WPP operating concept, which is to use the wind's kinetic energy to rotate a moving section of the wind turbine

connected to the rotor of the energy generator. The gearbox placed within boosts the shaft's speed. This work produces three-phase alternating current.

The wind generator's stator winding converts mechanical energy into electrical electricity.

The EIS project included estimations of pollutants emitted during construction of the WPP. According to the estimations, the wind power plant's construction is expected to emit 40.754 tons of temporary pollutants. Pollution is primarily caused by carbon monoxide (14.9285 tons, 36.63%), followed by inorganic dust (10.0461 tons, 24.65%).

Calculations of dispersion fields of ground-level concentrations of pollutants indicate that maximum concentrations of pollutants outside the WPP site during construction do not exceed the quotas established for the Republic of Karakalpakstan.

There are no emissions of pollutants during the **WPP operation** when generating electricity using only wind energy, which is the main advantage of the proposed WPP from the standpoint of environmental protection.

The following devices can emit little amounts of pollutants into the air: through leaks - oil-filled power transformers, emissions from which are minor oil hydrocarbons in the amount of 0.0028 t/year; from a backup (emergency) power source for the substation - a diesel generator, used exclusively in emergency situations, during operation of which 7 types of pollutants will be released into the atmosphere in the amount of 0.0004 t/year.

During construction, water is utilized at the construction site to prepare cement mortar, to prevent dust, and to meet the demands of the builders' household needs (200 persons). During construction work, water will be supplied.

For drinking needs of construction workers, imported bottled water, purchased independently by the construction contractor, is partially used. At temporary construction sites, specially equipped places with sealed containers (dry closets) are provided for the collection of household wastewater. The contents of dry closets must be transported to the nearest wastewater treatment plant.

To prepare the cement mortar and water the area in order to reduce dust, water will be brought by water carriers from the nearest irrigation collector in the amount of

13.2 m3/day, or 4818.0 m3/year. Water consumption is considered irreversible loss. There are no industrial wastes.

During operation of the WPP under consideration, water at the WPP site will be utilized for domestic purposes. To meet the household needs of the 20 individuals working at the wind farm, water will be sourced from the nearest village. The total disposal of household wastewater during the WPP operation is estimated to be 4.03 m3 per day or 1470.22 m3 per year. These wastewater streams are planned to be directed through intra-sewage systems to a ground-based biological septic tank situated in an open area of the WPP territory, specifically within the administrative and functional auxiliary areas. The biological septic tank integrates both mechanical and biological treatment processes for wastewater. Purified water, as outlined in the draft EIS, can be recycled for site irrigation, while the sludge can serve as fertilizer for plants.

At the proposed 200 MW WPP, both industrial and domestic waste will be produced during construction and after commissioning.

During the WPP construction phase, the following waste generation totaling 6098,425 t/year is expected: concrete and reinforced concrete waste - Hazard Class 5, sand waste - Hazard Class 5, construction crushed stone with depleted consumer properties - Hazard Class 5, waste from steel electrodes (cinders and remnants of steel welding electrodes) - Hazard Class 5, waste from solvents and paints - Hazard Class 3, waste from a mixture of different hardened plastics (such as paint containers) - Hazard Class 3, cleaning materials contaminated with oils (with an oil content below 15%) - Hazard Class 4, construction waste - Hazard Class 4, solid waste (unsorted waste from temporary residential premises, excluding large items) - Hazard Class 4.

Waste from operation of special equipment and vehicles is not generated directly on the site. Maintenance and repair of special equipment used during construction is carried out at the contractor's premises.

The construction organization, acting as the general contractor, is responsible for collecting and temporarily storing both solid waste and industrial waste generated during construction activities. These wastes are stored in specially equipped areas and subsequently removed for disposal by specialized organizations, as outlined in the contract for construction and installation work. The general contractor organization bears full responsibility for sanitary, epidemiological and environmental situation to the owner and inspecting authorities.

The construction waste will be removed from the site by the construction organization in accordance with contracts concluded with waste disposal organizations.

Analysis of the project design indicates that during the WPP operation of main and auxiliary sections, as well as during repair activities, approximately 11 types of waste will be generated annually, amounting to 131.558 tons: spent wind generator blades - 104.4 tons, Hazard Class 4; waste transformer oil - 11.675 tons per year, Hazard Class 2, spent silica gel - 1.15 tons per year, Hazard Class 4; ferrous metal scrap - 0.5 tons per year, Hazard Class 5; non-ferrous metal scrap - 0.2 tons per year, hazard class 4; oily rags with an oil content of over 15% - 0.05 tons per year, Hazard Class 3; waste LED lamps - 0.008 tons per year, Hazard Class 4; paper waste - 0.035 tons per year, Hazard Class 4; canteen food waste - 1.54 tons per year, Hazard Class 5; solid household life wastage of working personnel - 1.0 tons per year; estimated sweepings from cleaning the territory - 11.0 tons per year, Hazard Class 4.

Currently, disposal of wind turbine blades made from composite materials presents a major challenge for the wind energy industry, especially when these blades reach the end of their operational lifespan or when the facility is decommissioned.

The proposed methods for recycling wind turbine blades are still under development. Current techniques, such as mechanical grinding, combustion, and pyrolysis, have various disadvantages, preventing the EIS project from fully addressing the problem of blade recycling. **In future designs, it will be necessary to find an appropriate solution for disposal of the wind turbine blades.**

The plan involves transporting the waste generated during the WPP's operation to specialized organizations for disposal, following the prescribed procedures. Household and construction waste will be removed in accordance with the established contracts.

Considering the potential emergency risks at the 200 MW WPP after the project realization, the project provides recommendations for prevention, elimination, and minimization of these risks.

The draft EIS includes recommendations to minimize the facility's adverse environmental impacts during both the construction and operation stages.

The draft EIS outlines the Environmental Management Plan, detailing measures to mitigate negative environmental impacts, as well as the Environmental Monitoring Plan to be implemented during the WPP construction and operation.

The State environmental expertise of the project confirmed that the submitted materials comply with the requirements of environmental legislation for the first stage of the environmental impact assessment.

The State Environmental Expertise Center under the Ministry of Ecology, Environmental Protection and Climate Change **agrees upon** the materials of the first stage of environmental impact assessment for the "Construction of the 200 MW NUKUS-II wind power station (WPP)" in the Beruniy district of the Republic of Karakalpakstan" project.

Responsible expert: DUROVA TAMARA TIMOFEYEVNA

MINISTRY OF ECOLOGY, ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE OF THE REPUBLIC OF UZBEKISTAN
STATE ENVIRONMENTAL EXPERTISE CENTER
Address: 10017, Tashkent, Mirzo Ulugbek district, Sayram street, 15, Tel: 71-203-00-22

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- STATE ENVIRONMENTAL EXPERTISE
- EXPERT CONCLUSION

NUMBER: 01-02/01-833
DOCUMENT TYPE: Draft Environmental Impact Statement

Issued to the Client of the State Environmental Expertise: JURU ENERGY CONSULTING LLC
TIN: 303454532
Subject name: Environmental impact assessment for the project: "Construction of the 44.3 km-long 220 kV double-circuit overhead line in the Beruniy district of the Republic of Karakalpakstan" (Draft Environmental Impact Statement)
Name of the project developer: JURU ENERGY CONSULTING LLC
TIN: 303454532
Responsible expert of the State Environmental expertise: DUROVA TAMARA TIMOFEYEVNA

According to Attachment 1, approved by Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 541 dd. September 7, 2020, **this subject of the State Environmental expertise qualifies for p.10 of** Category 2 **of environmental impact.**

Result of the State Environmental expertise: Positive conclusion

The state environmental expertise conclusion: This document is not considered legal without the accompanying attachment

Issue date: 27.05.2024
Validity period: 27.05.2027

The attached expert conclusion of the State Environmental expertise Center of the Ministry of ecology, environmental protection and climate change of the Republic of Uzbekistan and its branches on compliance of the subject of environmental expertise with ecological requirements, coordinates of location points, environment protection measures, requirements that must be fulfilled, etc. is ***an integral part of this conclusion of the State Environmental expertise and it is mandatory to fulfill requirements specified therein.***

Note: If the Client does not comply with environmental requirements stipulated in the conclusion of the State Environmental expertise, the conclusion of the State Environmental expertise shall be canceled in accordance with the procedure established by the laws.

General Director **G. Mukhamedov**

Attachment to the conclusion
of the State Environmental Expertise
dd. May 27, 2024 No. 01-02/01-833

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Requirements of the expert conclusion on results of the state environmental expertise

JURU ENERGY CONSULTING LLC, ACWA Power to:

- carry out extra study on the existence of vegetation and reptiles, as specified by the project, in spring of 2024, and develop and implement appropriate actions;

- obtain permission to shape trees in accordance with the legislation if shaping is required during construction and operation of the 220 kV OHL in order to retain the dimensions required by the draft EIS, from the crown to the overhead line wires (DCM RUz dd. August 22, 2022 No. 464 “On further improvement of the procedure planting, care and use of trees and shrubs not included in the state forest fund");

- in the event of trees entering the 220 kV OHL construction area**, revise the project design** for this area, or decide replanting or compensatory planting of trees and shrubs in accordance with the DCM of the Republic of Uzbekistan No. 464 dd. 08.22.2022 “On improving the procedure for planting, care and use of trees and shrubs not included in the forest fund."

- carry out measures provided for by the draft EIS to prevent and reduce adverse impacts on the environment during construction and operation of the OHL;

- in order to further improve the household and construction waste management system in accordance with Attachment 1, Chapter 2, p. 4 of Decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 40 dd. January 28. 2021 “On measures to further improve the procedure for carrying out works related to construction waste”, all types of construction waste should be

forwarded for rational reuse, disposal and recycling, or given away to other legal entities and individual entrepreneurs engaged in collection, transportation, disposal and (or) processing of the waste;

- take into account that when designing construction of new buildings and structures with a height of more than 12 meters from the ground surface and (or) a total area of more than 500 square meters, it is not allowed to allocate less than 25 percent of the total area of land for landscaping;

- create “green belts” on its own and adjacent territories (Basis: Decree of the President of the Republic of Uzbekistan dd. May 31, 2023 No. UP-81 “On measures to transform the sphere of ecology and environmental protection and organize the activities of the authorized state body”, p. 13e.)

The Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Karakalpakstan to take control of implementation by ACWA Power of the measures provided for in the draft EIS to prevent and reduce adverse impacts on the natural environment during the 44.3 km-long 220 kV OHL construction from the Beruniy substation to the Karatau substation, planned to be built on the territory of the Beruniy district of the Republic of Karakalpakstan.

Do not allow unauthorized cutting of trees and extraction of building materials, as well as unorganized waste disposal.

Responsible expert: DUROVA TAMARA TIMOFEYEVNA

Summary of the facility

To: Ismailov J.Sh.

Director of JURU ENERGY CONSULTING LLC

copy: ACWA Power Company,

Ministry of Ecology,

Environmental Protection

and Climate Change of the Republic of Karakalpakstan

Materials from the first stage of environmental impact assessment for the "Construction of the 44.3 km-long 220 kV double-circuit overhead line in the Beruniy district of the Republic of Karakalpakstan" project were submitted for the state environmental assessment.

Initiator of the planned activity: ACWA Power.

The basis for construction of the 44.3 km-long 220 kV double-circuit overhead line is the Public-Private Partnership Agreement signed on March 28, 2024 and a number of other regulatory and legislative documents.

The route of the 220 kV OHL begins at the existing Beruniy substation and extends to the proposed Karatau substation of the NUKUS-II wind farm.

With the 220 kV overhead line length of 44.3 km, the number of turning angles is 16 units. Point 1 and point 18 are the entry and exit points of the OHL from the Beruniy substation to the Karatau substation.

The draft EIS specifies coordinates of the OHL entry and exit points and coordinates of the OHL turning angles along the route, as well as the distance between the points.

The total area of land allocation for the 44.3 km-long 220 kV OHL construction is 564,701.3 m^2, of which: for permanent use (for supports and protective strip) - 8809.34 m^2; for temporary use (during the construction period) - 555891.9 m^2.

The minimum distance to residential and commercial buildings along the entire length of the designed 220 kV OHL route is 30 m, which meets the regulatory requirements for establishment of sanitary spaces for newly designed OHL in accordance with p. 2.23.4 of SanPiN No. 0350-17 “Sanitary norms and rules for protection of atmospheric air of populated areas of the Republic of Uzbekistan" and p. 4.2. of SanPiN No. 023607 "Sanitary standards and rules for ensuring safety of people living near high-voltage power lines." The distance to residential buildings also meets regulatory requirements for the size of the protective zone in accordance with the PUE (Electrical Installation Rules, 7th edition).

The inspection report of Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Karakalpakstan dd. January 26, 2024 is attached to the draft EIS regarding trees growing in the 220 kV OHL construction area.

According to Ordinance of the President of the Republic of Uzbekistan No. UP-46 dd. December 30, 2021 “On measures to accelerate landscaping works and further effective organization of tree protection in the Republic”: p. 2. The moratorium on cutting down valuable species of trees and shrubs not included in the state forest fund, **was extended for an indefinite period.**

To avoid the necessity of cutting down trees, they should be pruned to an acceptable height and have their side branches trimmed both before construction and during operation of the OHL.

If trees fall within the 220 kV OHL construction zone, JURU ENERGY CONSULTING LLC and ACWA Power should either reconsider the project design for this area or arrange for the replanting or compensatory planting of trees and shrubs in accordance with DCM of the Republic of Uzbekistan No. 464 dd. August 22, 2022, “On improving the procedure for planting, caring for, and using trees and shrubs not included in the forest fund.”

As outlined in the draft EIS, the criteria for selecting the 220 kV overhead line route included ensuring the shortest distance between power facilities (Beruniy substation and Karatau substation), minimum number of intersections with existing structures, and avoiding demolition of residential buildings.

As outlined in SanPiN RUz No. 0350-17, the sanitary protection zone (SPZ) for a 220 kV overhead line is 30 meters on both sides of the footprint of the outer phase wires, measured perpendicular to the overhead line.

The Sanitary Epidemic Station's conclusion on establishing a sanitary protection zone for the proposed 220 kV OHL is included in the draft Environmental Impact Assessment (Attachment 3).

Attached to the draft EIS are the Minutes from the Public hearings on the planned activities of JURU ENERGY CONSULTING LLC and ACWA Power, held in April 2024. These hearings involved stakeholders, including residents living near the project route, in accordance with the legal requirements.

As a result of the Public hearings, a decision was made to support the planned activities of JURU ENERGY CONSULTING LLC and ACWA Power in the designated area. This decision was documented with Minutes dd. April 2024, along with attached photographic materials (Attachment 3 to the draft EIS).

The route placement on the ground and intersections with engineering structures meet the current standards and were agreed with relevant organizations (Attachment 1 to the draft EIS).

Attached to the draft EIS is a general layout of the 220 kV OHL route, approved by various authorities of the Beruniy district of the Republic of Karakalpakstan (Attachment 2 to the draft EIS).

The OHL route primarily traverses desert, uncultivated, and unused lands, avoiding residential buildings and minimizing intersections with existing infrastructure.

The route does not require demolition of any housing, so no changes in the living conditions of the population along the entire length of the route are expected. Additionally, there is no need for cutting down trees.

There are no protected natural areas or preserved areas near the route under construction.

The draft EIS provides sufficient information on the climatic characteristics of the project area and existing sources of environmental impact. Analysis shows that the construction site of the 220 kV OHL is situated in an area with an acceptable environmental condition regarding air quality, surface and groundwater, soil, and vegetation.

Attached to the draft EIS is the Biodiversity Experts' Conclusion regarding the findings of biodiversity surveys carried out by Juru experts. These studies were conducted within the project area of the 200 MW Nukus-II Wind Power Plant, in the Beruniy district of the Republic of Karakalpakstan, and **the 44.3 km-long 220 kV double-circuit overhead line in the Beruniy district of the Republic of Karakalpakstan** (JV5 JEC-OLJT - 24-414, dd. April 30, 2024). The surveys conducted in March and April 2024, involved specialists in botany, herpetology, ornithology, theriology, and biodiversity assessment.

The survey results revealed the presence of rare species listed in both national and international Red Lists, such as the saker falcon (Falco cherrug), goitered gazelle (Gazella subgutturosa), and Russian tortoise (Testudo horsfieldii). Additionally, species under national protection, including the golden eagle (Aquila chrysaetos), corsac fox (Vulpes corsac), and Brandt's hedgehog (Paraechinus hypomelas) were identified. The conclusion drawn from the survey indicates that within the Project framework, measures will be implemented to mitigate threats and conserve these species.

The impact associated with land allocation is primarily limited to land acquisition for supports and a protective strip. No significant impact on surface waters is anticipated, and there are no major stream crossings expected.

A waste management system will be established to organize the collection, temporary accumulation, and movement of waste within construction site during construction activities, thereby mitigating their impact on soils, grounds, and surface waters.

Analysis of alternative design solutions demonstrated that the proposed route is optimal in terms of minimizing negative environmental impacts.

Construction of the 220 kV OHL route will involve a set of works, consisting of several sequential stage: preparatory work (laying out the centers of supports and the axis of the OHL route, rearranging engineering structures along the route, and distribution of materials along the route); construction works (laying out

excavation pits, excavation works, installing foundations and grounding devices, as well as assembling, installing, aligning, and securing the supports); installation work, (rolling out and connecting wires and cables, lifting them onto supports, tensioning, and securing them); commissioning works and start-up of the OHL.

The scope of construction and installation work is minimal, with the construction of the 220 kV overhead line expected to take 6 months.

The temporary construction site is an area where a construction team is temporarily located, equipped with the necessary construction equipment, vehicles, and living facilities for the construction team (such as a trailer and portable toilet), as well as waste storage containers.

To minimize disturbance to local residents, the construction site will be situated as far from residential buildings as possible. Due to the nature of the OHL overhead line construction, the construction team does not remain in one place for an extended period. Once work is completed in one area, the team moves on to the next location.

During construction, pollutants will be emitted into the air, and construction waste will be generated. Water consumption for drinking needs will total 68.625 m3. These impacts will be temporary, local, reversible, and insignificant.

The analysis of project designs revealed no sources of pollutant release and emissions into the air during the 220 kV OHL operation. There are no permanent jobs required for maintenance of the OHL after it is commissioned; repair and maintenance works will be performed by mobile teams, thus removing the requirement for water usage and drainage during operation.

Additionally, the process of transmitting and distributing electricity does not generate waste. All OHL equipment is designed for long-term operation without producing any permanent operational waste. However, over time, routine repairs of the power lines may generate waste in the form of materials used for these repairs.

During the construction phase, primary activities resulting in the release of pollutants into the air include excavation, loading and unloading operations when storing equipment and containers, as well as operation of construction machinery, mechanisms, and vehicles.

During construction of the 220 kV overhead line, it is expected that around 3.6311 tons of pollutants will be released into the air.

The most significant contributors to pollutant emissions during construction are carbon monoxide (46.62%) and nitrogen dioxide (14.93%), amounting to 1.279 tons per year.

Dispersion calculation analysis reveals that carbon monoxide, nitrogen dioxide, and inorganic dust are the primary contributors to atmospheric pollution, with maximum concentrations remaining within established limits.

Once the proposed 220 kV OHL route is commissioned, air pollution will cease.

During the OHL operation, a protective zone is established, consisting of a 30-meter-wide strip on each side of the outermost wire, where any construction work is prohibited.

Upon completion of the construction period, lands temporarily allocated for use will be returned to the land user after necessary reclamation work is carried out on the disturbed lands.

All OHL components will be delivered to the construction site fully assembled; thus, waste generation during the OHL construction is unlikely. However, the following types of waste may still be generated:

Hazard class III - waste of solvents, paints, waste of a mixture of dissimilar hardened plastics (paint containers);
Hazard class IV - cleaning material contaminated with oils (oil content less than 15%), construction waste, solid life wastage of working personnel;
Hazard class V - construction crushed stone that has lost its consumer properties, waste steel electrodes (cinders and remains of steel welding electrodes).
The total amount of waste during the construction period is 1.0675 tons.

Waste from operation of special equipment and vehicles is not generated directly on the site. Maintenance and repair of special equipment used during construction is carried out at the contractor's premises.
The generated waste from motor vehicles (worn-out tires, waste from batteries, oiled filters, used oils, etc.) is generated at the premises of mechanized services and disposed of by the contractor.

No waste generation is expected during the operation of the high-voltage line.

To minimize the negative impact of waste on the environment, separate collection of waste according to physical and chemical indicators and hazard class will be provided for all types of waste, and places will be arranged for their safe temporary storage.

On the territory of construction sites during construction work, a system for organizing the collection, temporary accumulation and movement of waste will eliminate their impact on soils, ground, ground and surface waters.

Analysis of alternative project design solutions indicated that the proposed route is optimal in terms of minimizing the environmental impact.

Emergency risks during the 220 kV OHL operation, as considered by the project, are primarily associated with potential fall of supports and broken wires. The environmental consequences of such incidents are minimized through measures such as reinforcement of the supports, maintaining necessary clearances between the overhead line and utilities, and utilizing high-frequency protection equipment and emergency automation.

The draft EIS outlines several measures to prevent and mitigate the adverse environmental impact of the construction project. These measures include installing special containers for collection and temporary disposal of waste generated during the OHL construction, with subsequent removal to specialized organizations and landfills for solid waste disposal. Additionally, the fertile soil layer removed during excavation of pits for support installation will be relocated to areas designated by the land user. Other environmental protection measures are also included.

Attached to the draft are the Disturbed Land Reclamation Plan, Environmental Management Plan (EMP) which will also ensure environmental protection, and Environmental Monitoring Plan (Attachments 8, 9, and 10 to the draft EIS).

The environmental expertise of the reviewed draft EIS materials showed that they meet requirements of legislative documents for the first stage of the environmental impact assessment.

The State Environmental Expertise Center under the Ministry of Ecology, Environmental Protection, and Climate Change **agrees upon** the materials for the first stage of the Environmental Impact Assessment for the "Construction of the

44.3 km-long 220 kV double-circuit overhead line in the Beruniy district of the Republic of Karakalpakstan" project.

If the Owner fails to comply with requirements specified in this state environmental expertise conclusion, validity of this conclusion will be terminated (Basis: Decree of the Cabinet of Ministers of the Republic of Uzbekistan dd. September 7, 2020, No. 541 “On further improvement of the mechanism of environmental impact assessment,” p. 57).

Responsible expert: DUROVA TAMARA TIMOFEYEVNA

ANNEX B – PROJECT'S LEGAL FRAMEWORK

International Conventions and Protocols

Uzbekistan is signatory to a number of effective international conventions pertaining to environmental management, social sustainability, climate change and human rights. The nationally binding E&S commitments enshrined in these accords will apply to the Project, as outlined in the following table.

International protocols and conventions

NAME OF INTERNATIONAL PROTOCOL/CONVENTION	SIGNED/ RATIFIED	RELEVANCE TO THE PROJECT
UN Framework Convention on Climate Change	Accession: 20 June 1993	The Project will comply with all national standards for GHG emissions in order to contribute to Uzbekistan's targets.
Kyoto Protocol to UNFCCC	Ratified: 12th October 1999	
Paris Agreement to UNFCCC	Signed: 19th April 2017	
Montreal Protocol on Substances that Deplete the Ozone Layer (with London, Copenhagen, Montreal amendments)	Accession: 10th June 1998	The Project will support Uzbekistan's contribution towards the protection of the ozone layer by refraining from use of ozone depleting substances.
Vienna Convention on the Protection of Ozone Layer	Accession: 18 May 1993	
UN (Rio) Convention on Biological Diversity	Accession: 19th July 1995	The Project will implement mitigation and management measures to ensure the conservation and protection of terrestrial and canal ecology during the Project lifecycle.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Accession: 10th July 1997	The Project staff and workers will be strictly forbidden from trading in any wild flora and fauna found in the Project site or outside the Project boundaries.
Convention on Migratory Species of Wild Animals	1 May 1998	The project will implement mitigation and management measures to ensure conservation of terrestrial and avian migratory species where identified.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	Accession: 7th February 1996	The Project will be required to adhere to all national and international standards for hazardous waste generation and management.
United Nations Convention to Combat Desertification	Ratified: 31 August 1995	The Project will not result in accelerated desertification through sourcing of its materials and will

Name of International Protocol/Convention	Signed/ Ratified	Relevance to the Project
		contribute to sustainable development.
UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes	Accession: 4th September 2007	The canal south of the project site is found between the border of Uzbekistan and Tajikistan. Therefore, the Project will ensure that any impacts to the canal I.e. discharge are mitigated and managed in accordance with the national and lenders requirements.
Paris Convention on Protection of the World Cultural and Natural Heritage	Succession: 13th January 1993	The Project will implement mitigation and management measures where items/sites/monuments of cultural or natural heritage are identified within or near the Project boundaries and notify the relevant authorities immediately.
Stockholm Convention on Persistent Organic Pollutants	Accession: 28th June 2019	The Project will implement control measures to eliminate any use of chemicals under Annex A and B and reduce the unintentional release of those under Annex C.

In addition to the national labour requirements, the Republic of Uzbekistan has also ratified the following ILO conventions.

ILO Conventions Ratified by Uzbekistan

ILO Conventions	Ratified
Convention No 29 on Forced Labour adopted in 1930	13th July 1992
Convention No 87 on Freedom of Association and Protection of the Right to Organise, adopted on 17th of June 1948	12th December 2016
Convention No 98 on the Right to Organise and Collective Bargaining adopted on 8th of June 1949	13th July 1992
Convention No 100 on Equal Remuneration adopted 6th of June 1951	13th July 1992
Convention 111 on Discrimination (Employment and Occupation) adopted 4th of June 1958	13th July 1992
Convention 138 on Minimum Age adopted 6th of June 1973	6th March 2009
Convention 182 on the Worst Forms of Child Labour adopted 17th June 1999	24th June 2008
Convention C105 on the Abolition of Forced Labour Convention, 1957	15th Dec 1997

ILO CONVENTIONS	RATIFIED
C187 Promotional Framework for Occupational Safety & Health Convention, 2006	14th September 2021
C081 Labour Inspection Convention 1947	19th Nov 2019
Protocol 29 – to the Forced Labour Convention	16th September 2019

Institutional Framework

Key organisations with responsibility for environmental management in Uzbekistan are:

- Cabinet of Ministers of the Republic of Uzbekistan (COM).
- Ministry of Ecology, Environmental Protection and Climate Change (MEEPCC).
- The Centre for State Ecological Expertise, which is under the MEEPCC.
- The Cabinet of Ministers of the Republic of Uzbekistan governs the executive body in the Republic of Uzbekistan following the Constitution of the Republic of Uzbekistan (Article 98), and the Law of the Republic of Uzbekistan "On the Cabinet of Ministers of the Republic of Uzbekistan" (new edition of 2019). The COM exercises the following main functions.

The Ministry of Ecology, Environmental Protection and Climate Change (MEEPCC) is the main regulating body of state administration on environmental protection issues. The primary responsibilities of the MEEPCC include ensuring the implementation of a unified state policy on environmental safety, environmental protection, and the use and reproduction of natural resources; and enforcing state control over the compliance of ministries, state committees, departments, enterprises, institutions, and organisations, as well as individuals, with respect to the use and protection of land, mineral resources, water, forests, flora and fauna, and atmospheric resources. Structurally, the MEEPCC consists of the central unit (located in Tashkent), regional units (oblast) and local (district) units.

The Centre for State Ecological Expertise: The Centre for State Ecological Expertise's activities are directly related to the evaluation of materials for EIA and the issuance of documents determining compliance with environmental requirements for planned or executed business and other activities, as well as determining the admissibility of the implementation of the object of environmental expertise.

Due to the cross-cutting nature of sustainable development and the environment, virtually all other state bodies have some responsibility towards them. Other Ministries, Departments and Agencies (MDAs) related to E&S impact management in the context of the Project include (but are not limited to):

Main National Institutions and Roles

NAME OF INSTITUTION	MAIN ROLE
Ministry of Energy of the Republic of Uzbekistan (MoE)	The Ministry of Energy of the Republic of Uzbekistan is the authorised state body for: (i) implementation of production sharing agreements on issues related to the main areas of its activities; (ii) implementation of a unified state policy in the field of the use of renewable energy sources; (iii) development of a unified state policy and strategic directions in the development and use of nuclear energy; (iv) introduction of modern energy-efficient and energy-saving technologies in state bodies and organizations, as well as monitoring the efficiency of energy consumption.
Ministry of Ecology and Environmental Protection and Climate Change	Ministry is responsible for managing environmental monitoring for industrial facilities. It reviews and issues technical conditions for construction and operation of facilities, both planned and existing.
Ministry of Mining Industry and Geology of the Republic of Uzbekistan	Ministry is responsible for managing and monitoring mining and geological activities. It will dictate technical condition for conducting construction activities near ongoing geological/mining activities and surveys at the Project boundary.
State Committee on Sericulture and Wool development Industry	Committee owns pastural lands across Uzbekistan, including Project site. It will allocate land for permanent acquisition for installation of wind turbines.
Ministry of Transportation	Responsible for development of domestic and international transport corridors, improvement of the logistics system and amelioration of traffic safety. Important for the Project considering the use of public roads during construction and operation.
Sanitary and Epidemiological Welfare and Public Health Service of The Republic of Uzbekistan	Responsible for determining the Health Protection Zone (HPZ) under the Ministry of Health. The HPZ applicable for the Project is determined this government organisation.
JSC National Electric Grid of Uzbekistan (NEGU)	NEGU is entrusted with the following key functions: (a) transmission system operation and development; (b) dispatch management of the power system; (c) transmission of electricity within the country; (d) regional connectivity and electricity trade (export and import); and (e) single purchaser of electricity from generation companies, including IPPs, as well as the sale of electricity to distribution companies.

Lender E&S Requirements

The Project developer is pursuing an amount of project finance from a number of Financial Institutions (FIs), which seek to mainstream environmentally and socioeconomically sustainable development planning through the evaluation and management of E&S risks associated with investment projects, in step with:

- Internal E&S policies, standards, and guidelines

- Industry-wide, voluntary E&S risk assessment and management frameworks drawing on well-developed and internationally accredited E&S performance standards

The Project's prospective lenders include Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), and Netherlands Development Finance Company (FMO). Some of these FIs have adopted the International Financial Corporation (IFC) and Equator Principles Financial Institutions (EPFIs).

The E&S policies, frameworks, and performance standards applicable the Project based on its prospective lenders are outlined in the following sub-sections.

Asian Development Bank (ADB)

The E&S policies, principles and objectives adopted by the ADB are enshrined in the Safeguard Policy Statement (SPS 2009). The main focal areas of the Policy are (i) environmental safeguards, (ii) involuntary resettlement, and (iii) Indigenous Peoples (IP) safeguards. The key objectives of the SPS include:

- To avoid adverse impacts of projects on the environment and affected people, where possible.
- To minimise, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is impossible.
- To help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

ADB's SPS sets out the policy objectives, scope and triggers, and principles for three key safeguard areas:

- Environmental safeguards;
- Involuntary resettlement safeguards; and
- Indigenous Peoples safeguards.

ADB's Indigenous People's Safeguard is not applicable to this Project. This is because as per the ADB's requirement on Indigenous Peoples, there are no indigenous peoples within the project area of influence.

The Project is required to comply with the following policies and associated 'operations manuals' and guidelines:

- ADB Safeguard Policy Statement (2009);
- ADB Social Protection Strategy (2001) (national laws and key ILO standards);
- ADB Gender and Development Policy (1998); and

- ADB Access to Information Policy (2018).

Asian Infrastructure Investment Bank (AIIB)

As stated in the AIIB Environmental and Social Framework (ESF), 2024), the Bank has established an Environmental and Social Policy (ESP), which sets forth mandatory environmental and social requirements applicable to all Projects. The Policy underlies the AIIB Environmental and Social Standards (ESSs) and Environmental and Social Exclusion List (ESEL). The ESSs that govern E&S performance on AIIB-funded project include:

- ESS 1: Environmental and Social Assessment and Management (ESS 1);
- ESS 2: Land Acquisition and Involuntary Resettlement (ESS 2); and
- ESS 3: Indigenous Peoples (ESS 3).

For the screening, assessment and management of E&S risks pertaining to pollution control and environmental health and safety, the ESF stipulates conformance to the World Bank Group Environmental Health and Safety Guidelines (EHSGs).

Netherlands Development Finance Company (FMO)

FMO is committed to work constructively with other DFIs and banks. This includes exchanging information, collaborating in developing a mutual understanding of ESG risks, impacts and mitigation strategies, co-financing and engaging with customers. FMO may partially or fully rely on trusted Partner institutions to operationalize the intentions of FMO's Sustainability Policy during due diligence, contracting and monitoring, in line with their own processes and procedures. FMO is a member of EDFI, and has a Friendship Facility agreement with the German Investment Corporation or DEG (Deutsche Investitions- und Entwicklungsgesellschaft) and Proparco under which FMO relies on the Partner's investment due diligence and customer monitoring. Similarly, FMO has a Master Cooperation Agreement with IFC (International Finance Corporation).

GERMAN INVESTMENT CORPORATION (DEG)

The DEG undertakes E&S due diligence for its investment portfolio, in accordance with its Guideline for Environmental and Social Sustainability (GESS). The Corporation is a member of the KfW Bankengruppe, having endorsed the United Nations Environment Programme (UNEP) Initiative for Financial Institutions on the Environment and Sustainable Development. The GESS references a commitment to observing E&S requirements promoted by the European Development Finance Institutions (EDFIs), which include the Equator Principles (EPs), IFC Performance Standards (IFC PSs) and the material stipulations of the Environmental, Health

and Safety Guidelines of the World Bank Group, and the Conventions of the International Labour Organisation (ILO). These requirements are broadly described further below.

PROPARCO

Proparco is a development finance institution partly owned by the French Development Agency. The Corporation's Environmental and Social Governance (ESG) framework is rooted in the E&S management instruments of the AFD Group, the principles common to European donors, IFC's Performance Standards, the ILO international labour standards, the FAO criteria, and basic principles such as those of the Universal Declaration of Human Rights.

AFD E&S RISK ASSESSMENT AND MANAGEMENT FRAMEWORK

The French Development Agency has established an Environmental and Social Risk Management Policy (2017), which provides for the development of operating procedures to identify, prevent or mitigate environmental and social risks and impacts, as well as any human rights violation that could result from AFD-funded activities.

All operations financed by AFD are required to comply with the national regulations of the country where the operation is implemented, including for environmental and social issues. However, as regulations in some of the countries where AFD operates are incomplete or under development, AFD uses as a reference a number of performance standards, good practices and directives produced by international standard-setting organizations, as well as major conventions on sustainable development, which altogether include:

- The World Bank Safeguard Policies for public sector financing.
- The UN Principles for Responsible Investment (UNPRI).
- The IFC Performance Standards.
- The United Nations Universal Declaration on Human Rights.
- The ILO fundamental conventions on labour law.
- The United Nations Convention on the Elimination of All Forms of Discrimination against Women.
- The OECD guidelines for multinational enterprises.

Equator Principles

The Equator Principles (EP) is a risk assessment framework used by financial institutions to determine, assess and manage the environmental and social risk in Project's financing. Currently, over seventy-five major financial institutions from around the world have adopted the EPs. These financial institutions operate in more than 100 countries worldwide.

The Equator Principles were updated in 2006 (EPII), 2013 (EPIII) and a further update EPIV came into effect in October 2020. The EPs currently include provisions for the following:

- Principle 1: Review and Categorisation;
- Principle 2: Environmental and Social Assessment;
- Principle 3: Applicable Environmental and Social Standards;
- Principle 4: Environmental and Social Management System and Equator Principles Action Plan;
- Principle 5: Stakeholder Engagement;
- Principle 6: Grievance Mechanism;
- Principle 7: Independent Review;
- Principle 8: Covenants;
- Principle 9: Independent Monitoring and Reporting; and
- Principle 10: Reporting and Transparency.

EP IV establishes the minimum E&S standards to be adopted by EP Financial Institution (EPFIs) as those from IFC Performance Standards on Environmental and Social Sustainability (Performance Standards), the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) and/or the relevant host country laws, regulations and permits that pertain to environmental and social issues.

IFC Performance Standards

The IFC Performance Standards are a key component of the IFC's Sustainability Framework and directed towards clients (i.e. party responsible for implementing and operating the project that is being financed), providing guidance on how to identify risks and impacts. The IFC Performance Standards are designed to help avoid, mitigate, and manage risks and impacts throughout the life of a project as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities.

The IFC Performance Standards (2012) are listed below:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Performance Standard 2: Labour and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention
- Performance Standard 4: Community Health, Safety, and Security

- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

WBG EHS Guidelines (2007)

The World Bank Group International Finance Corporation (IFC), Environmental, Health and Safety (EHS) General Guidelines of April 2007 superseded the World Bank Handbook issue of 1998.

In terms of specific guidelines to control environmental externalities (e.g. wastewater quality etc.), EHS guidelines have been set out by IFC and the World Bank Group to provide general guidelines for its members when involved in a project or when providing financial support to a project. These guidelines contain general and industry-specific examples of Good International Industry Practice (GIIP). In summary, it should be noted that the following IFC EHS Guidelines are relevant to this project:

- General EHS Guidelines, Environmental:
  - Air Emissions and Ambient Air Quality;
  - Energy Conservation;
  - Wastewater and Ambient Water Quality;
  - Water Conservation;
  - Hazardous Materials Management;
  - Waste Management;
  - Noise; and,
  - Contaminated Land.
- General EHS Guidelines, Occupational Health & Safety:
  - General Facility Design and Operation;
  - Communication and Training;
  - Physical Hazards;
  - Chemical Hazards;
  - Radiological Hazards;
  - Personal Protective Equipment (PPE);
  - Special Hazard Environment; and,
  - Monitoring.
- Community Health & Safety:

- Water Quality and Availability;
- Structural Safety of Project Infrastructure;
- Life and Fire Safety (L&FS);
- Traffic Safety;
- Transport of Hazardous Materials;
- Disease prevention; and,
- Emergency Preparedness and Response

- Industry Sector Guidelines, Power:
  - Electric Power Transmission and Distribution (2007); and
  - Wind Energy (2015).

Applicable Environmental Standards

Applicable standards required for Project compliance are included to the respective environmental parameter sections of this report. This includes national standards and those expected for the lenders.

Air Quality Applicable Requirements & Standards

THE LAW OF THE REPUBLIC OF UZBEKISTAN "ON ATMOSPHERIC AIR PROTECTION" (1996, AMENDED ON 13.03.2020)

This regulation specifies standards, quality and harmful effects norms, requirements on fuels, lubricants, production and operation of vehicles and other transport means and equipment, ozone layer protection requirements, obligations of enterprises, institutions and organisations toward atmospheric protection, and compensations of damages from atmospheric pollutions.

SANPIN № 0293-11 "Hygienic regulations. List of maximum permissible concentrations (MPC) of contaminants in the atmospheric air of inhabitant areas in the territory of the Republic of Uzbekistan"

Ambient Air Quality MPC (mg/m³)

Pollutant	(MPC mg/m³)			
	One-time	24-hour	Monthly	Annual
NO_2	0.085	0.06	0.05	0.04
NO	0.6	0.25	0.12	0.06
CO	5	4	3.5	3
SO_2	0.5	0.2	0.1	0.05
NH_3	0.2	0.12	0.06	0.04

Note: Maximum one-time concentration - the highest concentration detected at 20-30-minute sampling.

- Average daily concentration is the average of the one-time concentrations detected during the day or obtained with continuous 24-hour sampling.
- Monthly average concentration is the average of the average daily concentration detected during the month.
- Average annual concentration is the average of the number of average monthly concentrations revealed during a year in the course of one-time sampling.

ADB, AIIB AND EPFIS

ADB, AIIB and EPFIs require adherence to the World Health Organisation (WHO) Ambient Air Quality Guidelines (2021).

WHO Ambient Air Quality Standards (µg/m³)

PARAMETER	24-HOUR	ANNUAL
PM_{10}	150 (Interim target 1)	70 (Interim target 1)
	100 (Interim target 2)	50 (Interim target 2)
	75 (Interim target 3)	30 (Interim target 3)
	50 (Interim target 4)	20 (Interim target 4)
	45 (guideline)	15 (guideline)
$PM_{2.5}$	75 (Interim target 1)	35 (Interim target 1)
	50 (Interim target 2)	25 (Interim target 2)
	37.5 (Interim target 3)	15 (Interim target 3)
	25 (Interim target 4)	10 (Interim target 4)
	15 (guideline)	5 (guideline)
NO_2	120 (Interim target 1) 50 (Interim target 2) 25 (guideline	40 (Interim target 1) 30 (Interim target 2) 20 (Interim target 3) 10 (guideline)
SO_2	125 (Interim target 1)	500 (10-minute guideline)
	50 (Interim target 2)	
	40 (guideline)	
O_3	100 (interim target 1) (8-hour daily maximum)	
	70 (interim target 2) (8-hour daily maximum)	
	60 (8-hour daily maximum guideline)	

Noise & Vibration - Applicable Requirements & Standards

SANPIN NO. 0267-09 relating to rules on acceptable levels for habitable areas in Uzbekistan sets out the acceptable noise levels for habitable areas both inside and outside of buildings in Uzbekistan as shown in the table below.

Noise Limits under SanPiN No.0267-09

Location	Time	SanPiN No. 0267-09
Noise levels in premises of residential, public buildings and on the territory of residential areas	7am to 11pm	55dB(A)
	11pm to 7am	45dB(A)

SANPIN NO. NO 03225-16 sanitary standards for permissible noise levels in the workplace aims to protect the health of the staff and workers in the workplace. The law represents noise levels for a variety of internal and external application as shown in the table below:

Work Environment Noise Limits

Type of work, Workplace	Requirement
Performing all types of work on the permanent workplaces in industrial premises and in the enterprises	80db(A)

ADB, AIIB AND EPFIS

ADB, AIIB and EPFIs require adherence to WHO noise standards as detailed in World Bank EHS Guidelines (2007), as shown in the following figure.

World Bank Ambient Noise Level Guidelines

Receptor	One Hour LAeq dB(A)	
	Daytime (07:00 – 22:00)	Night (22:00 – 07:00)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70

These relates to receptors and not the plant boundary. Noise impacts should not exceed the levels presented above, or result in a maximum increase in background levels of 3 dB(A) at the nearest sensitive receptor location off-site.

Furthermore, the following requirements have also been specified in the WBG EHS noise guidelines:

- No employee should be exposed to a noise level greater than 85 dB(A) for duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).

- The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound level reaches 140 dB(C), or the average maximum sound level reaches 110 dB(A). Hearing protective devices provided should be capable of reducing sound level at the ear to at least 85 dB(A).
- For every 3 dB(A) increase in sound levels, the allowed exposure period or duration should be reduced by 50%.
- Where feasible, use of acoustic insulating materials isolations of the noise source and other engineering controls should be investigated and implemented prior to the issuance of hearing protection devices as the final control mechanism.
- Medical hearing checks on workers exposed to high noise levels should be performed periodically.

NOISE REQUIREMENTS FOR WIND PROJECTS

The World Bank/IFC EHS Guidelines for Wind Projects include information relevant to the EHS aspects of onshore and offshore wind energy facilities.

For operational phase noise, the IFC Guideline for Wind Energy include principles for the assessment of sound from wind turbines, which include the following (WBG/IFC, 2015):

- Receptors should be chosen according to their environmental sensitivity (human, livestock or wildlife);
- Preliminary modelling should be carried out to determine whether more detailed investigation is warranted. The preliminary modelling can be as simple as assuming hemispherical propagation (i.e., the radiation of sound, in all directions, from a source point). Preliminary modelling should focus on sensitive receptors within 2,000 meters (m) of any of the turbines in a wind energy facility;
- If the preliminary model suggests that turbine noise at all sensitive receptors is likely to be below an LA90 to 35 dB(A) at a wind speed of 10 meters/second (m/s) at 10m height during day and night times, then this preliminary modelling is likely to be sufficient to assess noise impact; otherwise, it is recommended that more detailed modelling be carried out, which may include background ambient noise measurements;
- All modelling should take account of the cumulative noise from all wind energy facilities in the vicinity having the potential to increase noise levels;
- If noise criteria based on ambient noise are to be used, it is necessary to measure the background noise in the absence of any wind turbines. This should be done at one or more noise-sensitive receptors. Often the critical receptors will be those closest to the wind energy facility, but if the nearest is also close to other significant noise sources, an alternative receptor may need to be chosen; and

- The background noise should be measured over a series of 10-minute intervals using appropriate wind screens. At least five of these 10-minute measurements should be taken for each integer wind speed from cut-in speed to 12 m/s.

The above principles are referenced from the following key guidance documents:

- ETSU, Report ETSU-R-97 "The Assessment & Rating of Noise from Wind Farms" 1997.
- Institute of Acoustics (IOA) "A Good Practice Guide to the Application of ETSU-R-97 for the Assessment & Rating of Wind Turbine Noise" 2013.
- D. McLaughlin "Wind Shear and its Effect on Wind Turbine Noise Assessment" Acoustic Bulletin, July/August 2012, 39-42.

VIBRATION GOOD PRACTICE GUIDELINE

Good practice vibration exposure limits and action values are stated in guidance issued by the American Conference of Governmental Industrial Hygienists (ACGIH), which advises threshold limit values for both hand-arm vibration and whole-body vibration.

Geology, Soil & Groundwater - Applicable Requirements & Standards

The protection of geological formations, soil and water resources in Uzbekistan is regulated by the following laws and regulations:

SOIL QUALITY

- SanPiN No.0272-09 Sanitary rules and norms for compiling hygienic justifications for soil protection schemes from pollution in Uzbekistan": The Sanitary Rules and Norms include the basic requirements for development of hygienic justification for the soil protection schemes against pollution, duties and functions of state sanitary supervision bodies in this area.
- SanPiN No.0191-05 Maximum permissible concentrations (MPC) and Approximate allowable concentrations (AAC) of exogenous harmful substances in soil: This defines MPC values of chemicals and pesticides polluting the soil. MPCs and AACs are designed to ensure that there is no negative direct or indirect impact on human health, its future generations and public health through soil contact.
- SanPiN No.0212-06 Sanitary rules and norms for the hygienic assessment of soil contamination of different types of land use: This document provides a unified methodology for hygienic assessment of soil pollution using a nomenclature of indicators of soil hygienic condition, which should be used both in the development of regulatory and technical documentation on the hygiene of soils, and in assessing the degree of its pollution.

WATER RESOURCES

Water resource management, allocation and use in Uzbekistan falls under the Ministry of Agriculture and Water Resources (MAWR), which oversees national authorities I.e. provisional and district departments of agriculture and water resources, and inter provincial and inter district river management authority.

- Constitution of the Republic of Uzbekistan.

Article 55 states "Land, depths, water, flora and fauna and other natural resources are national wealth, should be rationally used and are under state protection."

- The Law of the Republic of Uzbekistan "On water and water use" (1993 as amended on 01.12.2021).

This law enshrines the key objectives for water legislation in Uzbekistan setting the following requirements:

- Article 1 requires "Regulation of water relations; effective use of water; protection of water from pollution, littering and exhaustion; prevention and liquidation of harmful impact on water resources; improvement of state water objects; and protection of the rights of enterprises, organisations, farms and citizens in the field of water relations."
- Article 3 stipulates that "Water resources are the state property and wealth of the Republic of Uzbekistan, should be rationally used and is protected by the state."

The law authorises the State through authorized agencies to carry out management and control of water use and protection.

Other key legislations and standards relevant to the Project include:

- SanPiN No 0255-08 which provides the criteria for hygienic assessment of the level water bodies contamination for health risks to the population in Uzbekistan.
- Decree of the Cabinet of Ministers No.255 of 31.03.2018 On the approval of some administrative regulations of the provision of public services in the field of nature use (scheme for issuing permits for special water use or water consumption) as amended on 15.01.2020.
- SanPiN RUz No. 0318-15. Hygienic and anti-epidemic requirements for the protection of water in reservoirs on the territory of the Republic of Uzbekistan.

The Decree № 981 of December 11 2019 "Regulation on procedure of establishing water protection zones and sanitary protection zones for water bodies on the territory of the Republic of Uzbekistan".

ADB

ADB Safeguard Requirements for Environment includes specific requirements to prevent pollution and to minimise or control the intensity or loads of pollutant emissions and discharge. This includes effective management of hazardous materials and wastes, which can all have an influence on soil and/or groundwater quality.

AIIB

ESS1 – Environmental and Social Assessment and Management: Point 38 relates to pollution prevention and references international good practice and internationally recognised standards such as the WBG EHS Guidelines.

EPFIs

IFC Performance Standard 3 on 'Resource Efficiency and Pollution Prevention' requires the client and/or the Project to:

- Avoid or minimise adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities; and
- Prevent the release of pollutants to water and land due to routine, non-routine, and accidental circumstances, or when not feasible, minimize and/or control the intensity and mass flow of their release.

GIIP

The Dutch Standards are environmental pollutant reference values (i.e., concentrations in environmental medium) used in environmental remediation, investigation and clean-up. The standards identify maximum allowable concentrations for contaminants in soil and groundwater. The soil intervention values indicate when the functional properties of the soil for humans, plants and animals is seriously impaired or threatened. They are representative of the level of contamination above which a serious case of soil contamination is deemed to exist. Groundwater target values provide an indication of the benchmark for environmental quality in the long term, assuming that there are negligible risks for the ecosystem.

The Dutch Standards for the most significant pollutants are presented in the table below. Where a parameter is not covered by the Dutch Standards, other appropriate international standards shall be used.

Dutch Soil and Groundwater Standards

Contaminant	Soil/Sediment (mg/kg dry weight)		Groundwater (µg/l)	
	Target	Intervention	Target	Intervention
1. Metals				

Contaminant	Soil/Sediment (mg/kg dry weight)		Groundwater (µg/l)	
	Target	Intervention	Target	Intervention
Antimony	3	15	-	20
Arsenic	29	55	10	60
Barium	200	625	50	625
Cadmium	0.8	12	0.4	6
Chromium	100	380	1	30
Chromium III	-	180	-	-
Chromium VI	-	78	-	-
Cobalt	9	240	20	100
Copper	36	190	15	75
Mercury	0.3	10	0.05	0.3
Mercury (inorganic)	-	36	-	-
Mercury (Organic)	-	4	-	-
Lead	85	530	15	75
Molybdenum	3	200	5	300
Nickel	35	210	15	75
Zinc	140	720	65	800
2. Other inorganic substances				
Chloride (mg Cl/l)	-	-	100	-
Cyanide (free)	1	20	5	1500
Cyanide (complex)	5	50	10	1500
Thiocyanate	1	20	-	1500

- **Note**: The soil values are calculated for a 'Standard Soil' with 10% organic matter and 25% clay. A case of environmental contamination is defined as 'serious' if >25 m³ soil or >100 m³ groundwater is contaminated above the intervention value.
- **Source**: Soil Remediation Circular 2009, Annex 1: Groundwater target values and soil and groundwater intervention values. (*Target values for soil refer to 2000 version as they are not present in the 2009)
- Where contaminants are found to exceed 'intervention' levels, this is considered to be a case of soil contamination, which is dangerous to the health of humans and the natural environment. Such a level of contamination should prompt a need for remediation, appropriate treatment and disposal.

Terrestrial Ecology & Avifauna - Applicable Requirements & Standards

The Law of the Republic of Uzbekistan "On Nature Protection" (1992) as amended in 2021

This law is the key national environmental law for the protection of the environment and the sustainable use of resources and the right for the population to a clean healthy environment. This law states legal, economic, and organisational basis for the conservation of the environment and the rational use of natural resources. Article 25 of this law states that the State Environmental Expertise (SEE) is a mandatory measure for environmental protection, preceded to decision making process. In addition, the law prohibits the implementation of any Project without approval from SEE.

The Law of the Republic of Uzbekistan "On Protected Natural Reserves" (2004) as amended in 2020

This law regulates the use and protection of protected natural territories. The main aim is to ensure preservation of typical, unique, genetic banks of plants and animals, prevent negative impact of human activities on nature, promote the study of natural processes and monitoring of the environment including promotion of environmental education.

The Law of the Republic of Uzbekistan "On Protection and Use of the Wildlife" (1997) as amended in 2016

This law regulates the use, protection, reproduction and restoration of wildlife in order to promote conservation and ensure diversity of species in their natural habitat.

Other laws and regulations include:

- The Law of the Republic of Uzbekistan "On Protection and Use of Vegetation" (1997) as amended in 2021.
- Decree of the Cabinet of Ministers "Regulation on the procedure for using plant world objects and passing licensing procedures in the field of using plant world objects" No. 290 of 10.10.2014 as amended in 2020. The law sets out the requirements to obtain permission to cut wood and shrub plantations that are in the zone of the construction site.

Decree of The President of The Republic of Uzbekistan, Dated December 30, 2021, No. UP-46 on Measures to Accelerate Greening Works and Further Effective Organization of Tree Protection in the Republic

The Decree prohibits the following:

- Acceptance of applications for tree cutting through centers of state services and the Unified Portal of Interactive Government Services.

- Issuance of conclusions on tree and shrub cutting by territorial environmental protection authorities.
- Issuance of permits by district and city administrations for the cutting of trees and shrubs not included in the state forest fund, for which a moratorium has been introduced.
- Pruning and cutting of trees and shrubs damaged by natural factors, plant diseases, and those posing a threat to human life and health, according to the document, can only be carried out by the landscaping authorities.
- Where trees not included in the forest fund have to be cleared for development and construction purposes, compensatory replanting must be carried out at a ratio of 10 young trees for one tree cut.

Lender Requirements

ADB

An element of the ADB Safeguard Requirement 1: Environment includes 'Biodiversity Conservation and Sustainable Natural Resource Management'.

It is stated that, *'The borrower/client will assess the significance of project impacts and risks on biodiversity and natural resources as an integral part of the environmental assessment process... The assessment will focus on the major threats to biodiversity, which include destruction of habitat'*… Further, *'The borrower/client will need to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks*…

Concerning the proposed Project site, as the land has been used for agriculture, *'the borrower/client will exercise care to minimize any further conversion or degradation of such habitat, and will, depending on the nature and scale of the project, identify opportunities to enhance habitat and protect and conserve biodiversity as part of project operations.*

AIIB

As outlined in AIIB's ESF, the Bank "*recognises that protecting and conserving biodiversity, sustainably managing terrestrial and aquatic natural resources and maintaining core ecological functions and services are fundamental to sustainable development. The objective of biodiversity conservation and sustainable management of natural resources should be balanced with a commitment to sustainable use of the multiple economic, social and cultural values of biodiversity and natural resources in an optimized manner. Through the Projects it finances, the Bank seeks, where applicable, to: (a) avoid adverse impacts on biodiversity and ecosystem services; and (b) assist its Clients in protecting and conserving biodiversity and promoting the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities*."

EPFI's

The assessment of impacts upon terrestrial ecology is required with due consideration to IFC Performance Standard 6 on Biodiversity Conservation and Sustainable Natural Resource Management. PS6 establishes requirements for protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources. When avoidance of impacts is not possible, measures to minimise impacts and restore biodiversity and ecosystem services should be implemented. Specifically, it is necessary to determine baseline conditions and categorise the projects habitats as 'critical', 'modified' or 'natural' to undertake the necessary assessment. The Performance Standard defines the different habitats as follows:

- Natural Habitat: "Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition";
- Critical Habitat: "Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes"; and
- Modified Habitat: "Modified habitats are areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area's primary ecological functions and species composition. Modified habitats may include areas managed for agriculture, forest plantations, reclaimed6 coastal zones, and reclaimed wetlands".

Landscape and Visual Impacts - Applicable Requirements & Standards

There are no regulations or standards in Uzbekistan that provide requirements for assessing landscape character, visual impacts and shadow flicker from wind turbines.

The EHS Guidelines for Wind Energy (2015) outline that *'preparing zones of visual influence maps and preparing wire-frame images and photomontages from key viewpoints is recommended to inform both the assessment and the consultation processes.'*

'Consideration should also be given to the proximity of turbines to settlements, residential areas, and other visual receptors to minimize visual impacts and impacts on residential amenity, where possible. All relevant viewing angles should be considered when considering turbine locations, including viewpoints from nearby settlements.'

Solid Waste & Wastewater Management - Applicable Requirements & Standards

THE LAW OF THE REPUBLIC OF UZBEKISTAN "ON WASTES" (2002) AMENDED IN 2019

The principle objective of this law is to prevent the negative impacts of solid wastes on human lives and health as well as the environment, reduce waste generation and encourage rational use of waste reduction techniques.

Article 19 Provided generated waste is subject to export and import operations, or hazardous waste is subject to transportation, an environmental certification procedure shall be completed by the Project to confirm compliance with sanitary and environmental norms and standards associated with waste management.

Article 20 states that transportation of hazardous waste shall be in specially designated types of vehicles with a waste certificate and permit. The responsibility for safe transportation of hazardous waste shall be with the transporting organisation.

Article 22 of the Law on Wastes specifies the general requirements for waste storage and disposal. Waste disposal of recyclable waste is prohibited in Uzbekistan. In addition, storage and disposal of waste in the environment including in nature conservation and protected areas, settlements, health and recreational areas or historical and cultural facilities is prohibited.

SANPIN NO 0127-02 – "SANITARY PROCEDURES FOR INVENTORY, CLASSIFICATION, STORAGE AND DISPOSAL OF INDUSTRIAL WASTE"

This regulation and norm ensure optimal hygienic accounting and inventory of industrial wastes, determination of toxicity index and classification of industrial waste by hazard classes with optimal selection of ways to neutralise and utilise them.

SanPiN of the Republic of Uzbekistan dated 29/7/2002 No 0128-02 – "Hygienic classifier of toxic industrial wastes in the Republic of Uzbekistan. Hazardous waste is classified into four groups known as "hazard classes". Waste hazards are assessed based on this law. Hygienic classifier of industrial hazardous waste and SanPiN No 0127-02-Sanitary procedures for industrial waste inventory, classification, storage and disposal. Waste hazard classes include:

- Class I: Extremely hazardous waste;
- Class II: Highly hazardous waste;
- Class III: Moderately hazardous waste;
- Class IV: Low hazardous waste; and

Other relevant regulations and standards include:

- SanPiN № 0157-04 "Sanitary requirements to the storage and neutralization of solid domestic waste on special grounds in Uzbekistan"
- SanPiN of the Republic of Uzbekistan dated 16/11/2011 No 0300-11 "Sanitary Rules and Standards for managing collection, inventory, classification, treatment, storage and disposal of industrial waste in the context of Uzbekistan
- Regulation "On the Procedure for the Disposal, Collection, Pay Settlement, Storage and Removal of Waste Industrial Oils" annexed to the Decree of the Cabinet of Ministers dated 04/09/2012 No.258
- Regulation on the Procedure for Handling Coloured and Black Metal Scrap" annexed to the Decree of Cabinet of Ministers dated 06/06/2018 No. 425
- SanPiN No. 0158-04 - Sanitarian Rules and Norms on collection, transportation and disposal of wastes containing asbestos in Uzbekistan

SOLID WASTE

ADB

The Environmental Safeguard requires the borrower/client to avoid, or where avoidance is not possible, to minimise or control the generation of hazardous and non-hazardous wastes and the release of hazardous materials resulting from project activities. Where waste cannot be recovered or reused, it will be treated, destroyed, and disposed of in an environmentally sound manner.

Where the waste disposal is conducted by third parties, the borrower/client is required to use reputable and legitimate enterprises licensed by the relevant regulatory agencies.

AIIB

ESS1 – Environmental and Social Assessment and Management: Point 38 states the need to '*Minimize and manage waste generation, including through waste reduction and recycling, and release of hazardous materials from production, transportation, handling and storage.*'

EPFIs

Section 1.6 of "the IFC General EHS Guidelines" is entitled Waste Management and is applicable to all projects that generate, store or handle any quantity of waste; whilst Section 1.5 of the IFC EHS Guidelines covers Hazardous Materials Management. The waste management guidelines state that facilities that generate and store wastes should practice the following:

- Establish waste management priorities at the outset of activities;
- Identify EHS risks and impacts and consider waste generation and its consequences;

- Establish a waste management hierarchy that considers prevention, reduction, reuse, recovery, recycling, removal and finally disposal of wastes;
- Avoid or minimize the generation of waste materials, as far as practicable;
- Identify where waste generation cannot be avoided but can be minimized or where opportunities exist for, recovering and reusing waste; and
- Where waste cannot be recovered or reused, identify means of treating, destroying, and disposing of it in an environmentally sound manner.

WASTEWATER

EPFIs

The IFC/WBG General EHS Guidelines (2007) establish general requirements for direct or indirect discharge of wastewater from utility operations or storm water to the environment.

'Projects with the potential to generate process wastewater, sanitary (domestic) sewage, or storm water should incorporate the necessary precautions to avoid, minimize, and control adverse impacts to human health, safety, or the environment'.

However, wastewater effluent pollutant limits are only established for sanitary wastewater for discharge to the sanitary sewer systems. World Bank General EHS Guidelines (2007) (ref. Table 1.3.1 of IFC EHS Guidelines), provides indicative values for treated sanitary wastewater effluent.

Traffic & Transportation – Applicable Requirements and Standards

The Ministry of Transportation is responsible for all transport related activities and their requirements should be fully complied with in terms of routing of HGVs and site vehicles, licensing, road diversions, heavy/wide loads etc. Some of the relevant national requirements for the Project include:

- Law "About traffic safety" of the Republic of Uzbekistan August 19, 1999 No. 818-I (as amended on 29-12-2015): The main objective of this law is to ensure protection of life and health of citizens and their protection.
- Regulations on road safety during transportation of large and heavy loads by road transport (Annex No.2 to the Decree of Cabinet of Ministers No. 342 of December 26, 2011): This law determines the requirements of ensuring and coordinating traffic safety during the transportation of large size and heavy loads on public roads on the territory of Uzbekistan. It also details the basic requirements for the technical condition equipment and furnishing of vehicles used for the transport of large and heavy loads as well as safety.
- Criteria and Procedure for Determining International Road Transportation of Loads (approved by the Decree of Ministry of Transport of the Republic of Uzbekistan and

State Customs Committee of the Republic of Uzbekistan dated October 31, 2019, No. 6).

- Regulations on transport of loads by road in the Republic of Uzbekistan (Annex to Decree of Cabinet of Ministers No. 213 of 01.08.2014)

ADB, AIIB AND EPFIS

The assessment will be undertaken with due consideration of the recommendations set out within the IFC/World Bank General EHS Guidelines (2007) Section 3.4 Traffic Safety, within Section 3: Community Health and Safety.

Separate considerations regarding Community Health and Safety are also provided in the IFC EHS Guideline for Wind Energy (2015). This includes relevant items for 'Abnormal Load Transportation'.

Archaeology & Cultural Heritage – Applicable Requirements and Standards

Relevant legislation in Uzbekistan relating to archaeology and cultural heritage include:

- Law No. LRU-229 "On protection and use of the objects of archaeological heritage" (13 October 2009).
- Law No. 269-II "On the Protection and Use of Cultural Heritage Sites (30 August 2001, as amended).
- Presidential Decree No. R-5181 "On improving the protection and use of objects of tangible cultural and archaeological heritage" (16 January 2018).
- Resolution of the President of the Republic of Uzbekistan № RP-4068 dated December 19, 2018 "On measures for improving actions for protection of material cultural heritage objects".
- Resolution of the Cabinet of Ministers of the Republic of Uzbekistan № 846 dated October 4 2019 "On approval of the national list of real state sites and objects of material cultural heritage".

The above laws seek to protect and sites and objects of cultural heritage which are considered as part of the national heritage for all the people in Uzbekistan.

In addition, the Criminal Code of the Republic of Uzbekistan includes provisions that prohibit the intentional destruction or damage of objects of tangible cultural heritage under state protection, with further protections in place to protect cultural property in PAs, in particular protected historical and cultural territories, without first obtaining permission.

ADB

ADB's Safeguard Policy Statement and related Safeguards, include various requirements for cultural resources of importance locally, provincially, nationally, and internationally. Where such resources are identified the ADB safeguards highlight the importance of consulting with the communities who use such facilities, as well as the regulatory agencies entrusted with protecting such resources.

When a project is located in areas where physical cultural resources are expected, the ADB Safeguard Policy Statement requires the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.

AIIB

AIIB's ESF outlines the requirement to conserve and avoid impacts on cultural resources. The Framework further states "*when avoidance of impacts on cultural resources is not feasible, prepare a cultural resources management plan to mitigate and monitor these impacts*."

EPFI's

In accordance with the Equator Principles, the assessment will refer to applicable IFC Performance Standards on Social and Environmental Sustainability, specifically with due consideration of Performance Standard 8 – Cultural Heritage. PS8 aims to protect the adverse impacts of project activities and support its preservation and to promote equitable sharing of benefits from the use of cultural heritage. Cultural heritage in this standard refers to:

- Tangible forms of cultural heritage, such as tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values;
- Unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and
- Certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

Socio-Economics – Applicable Requirements and Standards

CONSTITUTION OF UZBEKISTAN (1992, AS AMENDED IN 2023)

The Constitution of Uzbekistan guarantees fundamental rights and freedoms in various domains:

SOCIAL INFRASTRUCTURE:

- Articles 48, 49, and 50 ensure:
- The right to health care and education.
- The right to a favourable environment and access to reliable environmental information.

LAND TENURE:

- Article 41 affirms the right to property ownership.
- Article 47 guarantees the right to housing and compensation in case of deprivation.
- Article 65 protects private property and ensures its legal equality.

LIVELIHOODS AND POVERTY ALLEVIATION:

- Article 43 mandates government measures for employment, protection against unemployment, and poverty reduction.
- Article 57 directs improvements in the quality of life for vulnerable groups to enhance their social participation and self-sufficiency.
- Article 67 grants entrepreneurs the right to conduct business activities independently.

HUMAN RIGHTS:

- Article 4 promotes respect for languages, customs, and traditions of all ethnic groups.
- Article 19 ensures equal rights and freedoms for all citizens without discrimination.
- Articles 25 and 26 protect the right to life and prohibit torture and cruel treatment.
- Article 27 specifies conditions for lawful restriction of freedom.
- Article 34 guarantees access to information related to rights and legitimate interests.
- Article 55 guarantees access to a competent, independent court.
- Article 58 mandates gender equality.

These provisions establish a comprehensive framework for rights, liberties, and duties in Uzbekistan.

THE LAND CODE (1998, AMENDED IN 2022)

The Land Code outlines land classification, allocation, use, and protection in Uzbekistan, including individual and collective land tenure and various land categories.

Key Provisions:

- **Article 16**: States all land is a national treasure and must be managed sustainably to support life, economy, and welfare.

- **Article 19**: Grants lifelong inheritable rights for dekhan/peasant farms, individual residences, and collective gardening.
- **Article 24**: Allows short-term and long-term (up to 50 years) leaseholds for agricultural and foreign investment enterprises, prohibiting sub-leases.
- **Article 28**: Requires initial and annual rent payments for leased land, based on its quality, location, and water supply.
- **Article 33**: Identifies legal tenure documents as state certificates and land-use agreements.
- **Articles 59 & 60**: Categorize land use for urban building, common use, agriculture, forestry, industry, transport, military, restricted use (wildlife, hazardous, cultural, recreational), water supply, and reserves.

Land administration framework

In addition, the Land Code establishes the institutional framework for the administration of land in Uzbekistan. The main governmental entities involved in the management of land resources include (but are not limited to):

- The Cabinet of Ministers of the Republic of Uzbekistan (as relevant)
- Council of Ministers of the Republic of Karakalpakstan (as relevant)
- State Assets Management Agency
- State Tax Committee
- Chamber of State Cadastres of the Cadastre Agency
- Regional Khokimiyats

THE CIVIL CODE (1996, AMENDED IN 2022)

The Civil Code comprehensively addresses civil relations, property rights, and contractual obligations in Uzbekistan:

- It defines the legal status of participants in civil relations, outlines procedures for property rights, and regulates contractual obligations.
- The code establishes rules for property withdrawal, value determination, compensation rights, and conditions for rights deprivation.
- It ensures full compensation for losses incurred due to rights violations, covering expenses to restore rights, property damage (real damage), and lost profits from normal civil activity.
- Article 8 stipulates that property rights subject to state registration arise upon registration, unless specified otherwise by law.

- Article 14 allows for compensation, including lost profits, if rights are violated and income is lost as a result.
- Article 83 defines immovable property as land, subsoil, buildings, and other fixtures firmly connected to the land.
- Article 84 mandates state registration for ownership and real property rights, making them legally effective only upon registration.
- Presidential Decree № DP-6243, dated June 8, 2021 "On measures to ensure equality and transparency in land relations, reliable protection of rights to land and their transformation into market assets"

Changes in procedure of land allocation were made on June 8th, 2021 through the Presidential Decree "On measures to ensure equality and transparency in land relations, reliable protection of rights to land and their transformation into market assets". Based on this PD, the authority of district governors to allocate land directly is abolished. It is also prohibited to seize, reserve, or transfer land with any document. This means, from August 1, 2021, some rights on land of local governors were restricted, and such restrictions will also affect the process of purchasing and leasing land. This is now forbidden for local governors to transfer land to citizens, businesses, organizations through immediate decision.

Instead, all types of land, including agricultural, commercial as well as for residential purposes will be allocated through an open electronic tender to winning bidder granting lease or ownership rights (depending on type of land and tender conditions).

The "E-AUCTION" is the platform that uses a software for online auctions, allowing participation via the internet and ensuring no interference during processing and the selection process of the winner. Initially, from September 1, 2017, it was used for property sales related to court documents. Due to its success, the platform was expanded to other sectors by government decisions.

The platform enables citizens to participate in fair and transparent auctions for a range of assets, including state properties, real estate, vehicles, land plots, mineral extraction rights, cleaning services, advertising installation rights, and more.

The aim is to ensure legality, transparency, and fairness in auctions, prevent price manipulation, and protect the integrity and confidentiality of information. The organization of these auctions is managed by JSC "Organization of electronic online auctions" for individuals and legal entities. All land acquisition for private leasehold is managed through State Asset Management Agency via an online auction process. Locally these auctions are managed by regional/district departments of cadastral agencies.

The process of obtaining Land Lease Agreement is as follows:

- UZSAMA posts notification on e-auction website indicating tender with details on the size, location, leasehold or freehold allocation, rent and/or initial prices of the plots.
- Candidates select and submit application suitable lot with type of land needed published at e-auction. Application must be submitted before the deadline indicted for selected lot/tender.
- Summitted applications are reviewed separately before auction take place. Selected candidates for auction process make pre-payment established for biding tender.
- Winning bidder is selected at auction process with a participation of selected candidates.
- Once auction is completed, winning bidder is awarded with certificate which will be a basis for issuing and signing LLA with relevant local municipalities (depending on location of land plot).
- Pre-payment done for tender is returned to all unsuccessful candidates.

These auctions are open to public bidders nationwide and are highly competitive, with land awarded based on the best price and performance on income-related criteria (e.g., agricultural performance and liabilities history). There is no fixed auction schedule, and land parcels of various sizes are auctioned as they become available, making it difficult to predict the availability and location of land. To participate, bidders must pay a bidding fee equivalent to 15% of the starting price, and depending on the leasehold type, the full cost of the land may need to be settled upfront.

LAW NO 781 ON PROCEDURES FOR THE WITHDRAWAL OF LAND PLOTS FOR PUBLIC NEEDS WITH COMPENSATION (2022)

This law outlines the expropriation of private land for public purposes, specifying conditions, procedures, and compensation for legally registered landholders.

Land Withdrawal Provisions:

- **Article 4**: Defines 'public need' developments justifying land withdrawal, including infrastructure projects like roads, railways, airports, bridges, energy lines, and irrigation systems.
- **Article 13**: Requires project initiators to identify the most suitable land with minimal pre-existing priority assets and present documentation to the Regional Khokimiyat.
- **Article 14**: Stipulates that land expropriation initiatives and supporting materials must be reviewed by the Cabinet of Ministers, resulting in a resolution for the project. The relevant khokimiyat is responsible for fulfilling obligations related to land withdrawal as per the resolution.

Compensation Provisions:

- **Article 23**: Specifies compensation for legal landholders, including market value for immovable property, compensation for lifelong/inheritable ownership, perennial plantations, and transitional expenses.
- **Articles 24 & 25**: Legalize monetary and in-kind compensation, requiring replacement assets of equal value and compensation for immovable assets within 24 months of eviction.
- **Article 25**: States that compensation for common property must be distributed according to ownership shares and paid within six months of the agreement or one month if monetary. Compensation amounts are subject to inflation indexation.

OTHER LEGISLATION

The following legislation provides for relevant socioeconomic aspects, including land access:

- Law of the Republic of Uzbekistan on State Land Cadastre No.666-I of 28.08.1998
- Urban Planning Code of the Republic of Uzbekistan (2021)
- Presidential Decree No. UP-5495 on measures on cardinal improvement of investment climate in the republic of Uzbekistan
- Resolution of the Cabinet of Ministers No.146 (2011), Appendix No. 2 to the regulation on the procedure for compensation for losses of landowners, users, tenants, and owners, as well as losses of agricultural and forestry production
- Resolution No. 911 of the Cabinet of Ministers (2019) on the procedure for withdrawal of land plots and compensation to owners of immovable property located on the land plot
- Law on Guarantees with Respect to Equal Rights and Opportunities for Women and Men (2019).

ADB

The ADB Environmental Safeguards include the need to assess socio-economic project impacts in ESIA (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues).

Specifically, 'The borrower/client will identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.'

ADB's Safeguard Requirement 2 on Involuntary Resettlement safeguard requires socio-economic surveys and census to be undertaken to identify all persons who will be displaced by the project and to assess the project's socioeconomic impacts on them.

ADB SPS Safeguard Requirement on Involuntary Resettlement requires meaningful consultation to be undertaken with affected persons, their host communities and civil society for every project with the potential for involuntary resettlement impacts. Consultation should be undertaken in a manner commensurate with the impacts on affected communities paying particular attention to the need of disadvantaged or vulnerable groups. This Safeguard Requirement also requires the establishment of a grievance redress mechanism to receive and facilitate the resolution of concerns and grievances from affected persons about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups.

ADB's SR2 also aims to avoid involuntary resettlement where possible; to minimise involuntary resettlement by exploring project and design alternatives; to enhance at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

The safeguard also requires adverse economic, social, or environmental impacts from project activities other than land acquisition such as loss of access to assets or resources or restrictions on land use to be avoided, or at least minimized, mitigated or compensated for through the environmental assessment process. Where such impacts are found to be adverse, the borrower/client is required to develop and implement a management plan to restore the livelihood of affected persons to at least pre-project level or better.

AIIB

ESS2 addresses impacts of Project-related land acquisition, including restrictions on land use and access to assets and natural resources, which may cause physical displacement (relocation, loss of land or shelter), and/or economic displacement (loss of land or assets, or restrictions on land use, assets and natural resources leading to loss of income sources or other means of livelihood).

Section D 'Social Coverage' outlines the requirement for social assessment, including, but not limited to, vulnerable groups and discrimination, gender, gender-based violence, land and natural resource access, loss of access to assets or resources or restrictions on land use.

EPFI's

Several of the IFC Performance Standards have elements that relate to socio-economics. Key requirements for the assessment of socio-economic impacts are outlined in PS1, whilst PS5 on

Land Acquisition and Involuntary Resettlement has important requirements relating to projects that acquire land or will necessitate physical or economic displacement to PAPs, including compensatory measures.

Community, Health, Safety & Security – Applicable Requirements and Standards

CONSTITUTION OF THE REPUBLIC OF UZBEKISTAN (1992, AS AMENDED IN 2023)

The constitution of the Republic of Uzbekistan lays out an array of constitutional rights, entitlements and duties pertaining to public health and safety, and access to judicial remedies for criminal offences. Key articles in this connection include the following:

- Article 25 states "The right to life is an inalienable right of every human being and shall be protected by law".
- Article 26 states "Human honour and dignity are inviolable. Nothing may be a basis for their derogation. No one shall be subjected to torture, violence or other cruel, inhumane, or degrading treatment or punishment.
- Article 27 states "Arrest, commitment, and confinement are allowed only by a court decision. Without a court decision, a person may not be detained for more than forty-eight hours".
- Article 40 states "Everyone shall have the right to a favourable environment, reliable information about its condition.
- Article 48 states "Everyone shall have the right to health and qualified medical care".
- Article 55 states "Everyone shall be entitled to legally defend his/her rights and freedoms and shall have the right to appeal any unlawful decisions, acts and omissions of State bodies and other organizations, their officials".

RESOLUTION OF CABINET OF MINISTERS OF REPUBLIC OF UZBEKISTAN NO.95 ON THE APPROVAL OF GENERAL TECHNICAL REGULATIONS OF ENVIRONMENTAL SAFETY (2020)

Provides for the establishment of health protection zones and isolation measures for energized national grid components, including electrical sub-stations and powerlines. These exclusion zones and safeguards are intended to prevent negative impacts on human health and ecological receptors, including exposure to hazardous levels of electromagnetic radiation, electrocution, and collision-related avian mortality.

DECREE OF THE CABINET OF MINISTERS OF THE REPUBLIC OF UZBEKISTAN NO.1050 ON APPROVAL OF RULES FOR PROTECTION OF POWER GRID FACILITIES (2018)

This decree establishes the procedure for mandating Grid Security Zones (GSZ) for power grid facilities, as well as special conditions for using land located within these exclusion zones, to ensure sustainable operation of the said facilities, with minimum risk to public health and safety, as well as vulnerable wildlife.

Grid Security Zones for power grid facilities shall be established on both sides of the power transmission line from the outermost wires and along the perimeter of substations at the following distances for voltages:

- 110kV – 20 meters from each outer-most conductor
- 220kV – 25 meters from each outer-most conductor
- 500kV – 30 meters from each outer-most conductor

The Grid Security Zone (GSZ) applicable to the protection of the Project's 220 kV OTLs is 25 metres (from the outermost conductors).

The Health Protection Zone for the Wind Farm has been established by the Agency for Sanitary and Epidemiology as 250 meters.

SAN RULES & NORMS NO. 0236-07 – SANITARY NORMS AND RULES TO ENSURE SAFETY FOR PEOPLE LIVING NEAR HIGH VOLTAGE POWER TRANSMISSION LINES (2007)

This regulation prescribes the Health Protection Zone (HPZ) for overhead transmission lines planned within areas including human settlements and establishments. The extent of mandatory HPZ is commensurate with the voltage rating of overhead powerlines. The HPZ serves to safeguard the public from hazardous exposure to electromagnetic fields radiating from high-voltage powerlines.

The lateral extent of the HPZ is measures from the outermost conductors along a given overhead transmission line alignment, as follows:

- Up to 110kV/m – 10 meters from each outer-most conductor
- Up to 220kV/m – 15 meters from each outer-most conductor
- Up to 330kV/m – 20 meters from each outer-most conductor
- Up to 500kV/m – 30 meters from each outer-most conductor
- Up to 570kV/m – 40 meters from each outer-most conductor

LAW ON PROTECTION OF WOMEN FROM HARASSMENT AND ABUSE (2019)

The national law provides for the protection of women from all forms of harassment and abuse. While violence against women is recognized in the Criminal Code of Uzbekistan, provisions for the registration, investigation, and prosecution of GBV are not prescribed in the Code.

In furtherance of the Code, the Act established specific procedures for the management of GBV cases for relevant law enforcement authorities and mandates the provision of medical, psychological, legal, economic, and humanitarian support to victims of GBV. In 2020, systems for the issuance of protection orders for victims of GBV were fully instituted across the country.

RESOLUTION ON MEASURES TO IMPROVE THE SYSTEM OF SOCIAL REHABILITATION AND ADAPTATION, AND THE PREVENTION OF DOMESTIC VIOLENCE (2018)

The Resolution No. PP-3827 of the Head of the State dated 07.02.2018 "On measures to improve the system of social rehabilitation and adaptation, as well as the prevention of domestic violence" identifies priority areas for improving the system of social rehabilitation and adaptation, prevention of family and domestic violence, and approved the program of practical measures to improve the system of social rehabilitation and adaptation, as well as the prevention of domestic violence.

The Resolution provides for the following key measures:

- Priority areas include improving the social system of rehabilitation, adaptation and preventative measures against domestic violence.
- A program of practical measures to improve the system of social rehabilitation, adaptation and prevention of domestic violence.
- A Center for Rehabilitation and Adaptation for victims of violence, as well as the prevention of suicides in territorial divisions of the Women's Committee of Uzbekistan.
- Public "hot line" on number "1146", for provision of emergency psychological, psycho-therapeutic and legal support and information about organizations that may provide additional assistance.

OTHER RELEVANT LEGISLATION

The list of laws and decrees with broad provisions for the protection of public health, safety and security, and other human rights in the context of public wellbeing, includes:

- Decree No. 964 of 5 December 2017 on measures for improvement of the activity of self-government bodies aimed at ensuring employment, firstly for the youth and women
- The National Human Rights Strategy was approved by Presidential Decree on 22 June 2020. No. PD-6012
- Law on guaranteeing equal rights and opportunities for women and men (2019)

- The Law on mediation (2018)
- Law on public control (2018)
- Law on administrative procedures (2018)

HUMAN RIGHTS

As a member of the United Nations, Uzbekistan supports and implements all the main international instruments of the United Nations relating to the protection of human rights and freedoms, including UN Universal Declaration of Human Rights, Human Rights Council Resolution No. 30/15 on human rights and preventing and countering violent extremism, Convention on the Elimination of all Forms of Discrimination against Women among others.

Uzbekistan's State Policy on human rights is aimed at preventing violations or any restriction on human rights and freedoms and at establishing the necessary organizational, legal, social, economic, spiritual and moral foundations for the protection of human rights.

Gender-based violence, harassment, and exploitation

Over the past decade, the Government of Uzbekistan has implemented a number of legal reforms and interventions geared towards the protection of women's rights and the elimination of GBV. An overview of the key executed initiatives to this end is provided in the table below.

Table 0-1 Reforms and Initiatives for Protection of Women's Rights and Support for GBV Victims

INTERVENTION	OBJECTIVES
Establishment of the Law on Protection of Women from Harassment and Abuse (2019)	The national law provides for the protection of women from all forms of harassment and abuse. While violence against women is recognized in the Criminal Code of Uzbekistan, provisions for the registration, investigation, and prosecution of GBV are not prescribed in the Code. In furtherance of the Code, the Act established specific procedures for the management of GBV cases for relevant law enforcement authorities and mandates the provision of medical, psychological, legal, economic, and humanitarian support to victims of GBV. In 2020, systems for the issuance of protection orders for victims of GBV were fully instituted across the country.
Establishment of the Resolution on Measures to Improve the System of Social Rehabilitation and Adaptation, and the Prevention of Domestic Violence (2018)	The Resolution No. PP-3827 of the Head of the State dated 07.02.2018 "On measures to improve the system of social rehabilitation and adaptation, as well as the prevention of domestic violence" identifies priority areas for improving the system of social rehabilitation and adaptation, prevention of family and domestic violence, and approved the program of practical measures to improve the system of social rehabilitation and adaptation, as well as the prevention of domestic violence.

INTERVENTION	OBJECTIVES
	The Resolution provides for the following key measures: • Priority areas include improving the social system of rehabilitation, adaptation and preventative measures against domestic violence. • A program of practical measures to improve the system of social rehabilitation, adaptation and prevention of domestic violence. • A Centre for Rehabilitation and Adaptation for victims of violence, as well as the prevention of suicides in territorial divisions of the Women's Committee of Uzbekistan. • Public "hot line" on number "1146", for provision of emergency psychological, psycho-therapeutic and legal support and information about organizations that may provide additional assistance.

ADB

- Under ADB Safeguard Requirement 1: Environment, the assessment of community health and safety is required in ESIA.
- Specifically, 'The borrower/client will identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.'
- This includes reasonably foreseeable incidents, accidents, and natural impacts (due to the Project) and requires affected communities to be informed. Appropriate provisions must be in place to plan for such events.

AIIB

ESS1 – Environmental and Social Assessment and Management: Point 8.1 outlines the need to consider community health and safety in the impact assessment, further stating "*this would include, as appropriate, risks related to pandemics and other forms of transmission of communicable diseases.*"

Section D 'Social Coverage' outlines the requirement for social assessment, including, but not limited to, vulnerable groups and discrimination, gender, gender-based violence, etc.

EPFIs

IFC Performance Standard 4 establishes requirements to safeguard local communities from potential risks associated with the Project including impacts associated with introduction of communicable disease, site access and operation, material use etc. The key objectives of PS4 are:

- To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances.
- To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.

In regard to human rights:

- In line with EP IV requirements, the United Nations Human Rights Guiding Principles apply to the Project. HRGP II on "The corporate responsibility to respect human rights" recognises that it is the responsibility of businesses and corporations to respect human rights. It is a global standard of expected conduct for all business enterprises wherever they operate. It exists independently of a States' ability and/or willingness to fulfil their human rights obligations and does not diminish those obligations.

Human Rights, Labour & Working Conditions – Applicable Standards & Requirements

CONSTITUTION OF THE REPUBLIC OF UZBEKISTAN (1992, AS AMENDED IN 2023)

Key constitutional provisions in regard to labour rights include:

- Everyone shall have the right to decent work, to free choice of profession and occupation, favourable working conditions that meet the requirements of safety and hygiene, to fair remuneration for work without any discrimination and not below the established minimum wage, as well as the right to unemployment protection in the manner prescribed by law.
- The minimum wage shall be determined considering the need to ensure a decent standard of living for a person.
- It shall be prohibited to refuse to hire women, dismiss them from work and reduce their wages on the basis of pregnancy or having a child.
- Any forced labour shall be prohibited, except as punishment under the court decision, or in some other Instances specified by law.
- Any form of child labour that poses a threat to the health, safety, morality, mental and physical development of the child, including those that prevent him or her from getting an education, shall be prohibited.
- The amount of pensions, allowances and other types of social welfare established by law, may not be set lower than the officially fixed minimum consumer expenditure.

- Trade unions express and protect the social and economic rights and interests of workers.
- Membership in trade unions is voluntary.

With regards to human rights, the constitution asserts that "democracy in the Republic of Uzbekistan shall be based upon common human principles, according to which the highest values shall be the human being, his life, freedom, honour, dignity and other inalienable rights."

LABOUR CODE OF THE REPUBLIC OF UZBEKISTAN (1995, AMENDED IN 2021)

The principal law on labour rights and welfare in Uzbekistan sets out the following requirements:

The main health and safety provisions in the labour law include H&S requirements, employees' obligation to comply with H&S standards, procedures and use of PPE, additional H&S measures for disabled employees, reporting and investigating accidents etc.

The labour code also specifies collective bargaining through collective contracts and agreements as a way of regulating labour relations and harmonising social and economic interests of both the employer and the employees.

OCCUPATIONAL HEALTH AND SAFETY (OHS) LEGISLATION

The legislation comprises the Labor Code, the Law on Occupational Health and Safety, the decrees of the President of the Republic of Uzbekistan, Occupational Health and Safety standards, decisions of executive government agencies taken within their competence in the form of decrees, executive orders, regulations, directives, rules, etc.

THE LAW ON OCCUPATIONAL SAFETY IN HAZARDOUS PRODUCTION FACILITIES (2006)

The Law stipulates the legal, economic and social terms of ensuring safe exploitation of hazardous production facilities, with the aim of building enterprise capacity and preventing accidents.

In addition to the main legislation, the Republic also has national normative documents addressing the issues of occupational health and safety. These include (i) Sanitary Rules and Norms (SanR&N), (ii) State Occupational Safety Standards (GOST, SSBT), (iii) Construction Norms and Rules (CR&N (SNiPs)), (iv) standards of the content of harmful substances (maximum allowable concentrations and levels), and (v) normative methodological documents on individual issues setting forth requirements for occupational safety in hazardous facilities, when manufacturing or applying various products. In addition to state normative documents, various sectors of industry enforce departmental and interdepartmental norms, requirements and rules of occupational safety and health.

The main state bodies responsible for the implementation of OHS policy are:

- Ministry of Employment and Labor Relations of the Republic of Uzbekistan, including the State Labor Inspection under the Ministry with territorial branches distributed throughout the Republic;
- State Committee for Industrial Safety of the Republic of Uzbekistan (Goskomprombez);
- Sanitary and Epidemiological Welfare and Public Health Committee of the Republic of Uzbekistan under the Ministry of Health of the Republic of Uzbekistan.

The Ministry of Employment and Poverty Reduction has an OHS directorate and the State Labor Inspection and its regional branches in the Republic of Karakalpakstan, viloyats (provinces), and the Tashkent city and district directorates and branches on labor, employment and social security. They constitute a single system of supervision and monitoring compliance with OHS requirements for ministries and agencies, institutions, organizations, and industrial and agricultural enterprises, with the exception of hazardous facilities that are under the jurisdiction of the State Inspection on Safety in Industry, Mining and the Housing and Utilities Sector.

OTHER PERTINENT LEGISLATION

The list of other laws and regulations providing for fair and safe working conditions and benefits include the following:

- Law "On the Employment of the Population" No. 642 of 20.10.2020
- Joint Decree of the Ministry of Labour and Social Protection of the Population (No. 7) and the Ministry of Healthcare (No. 13) "On approval of the list of jobs with unfavorable working conditions, where the employment of persons under 18 years is prohibited" registered by the Ministry of Justice of the Republic Uzbekistan, dated July 29 2009, No. 1990
- Decree of the Cabinet No. 133 of 11 March 1997 to approve normative acts necessary for the realization of the Labour Code of the Republic of Uzbekistan.
- Decree of the Cabinet of the Ministers No. 1011 of 22 December 2017 "On Perfection of the Methodology of Definition of Number of People in Need of Job Placement, including the Methodology for Observing Households with Regard to Employment Issues, also for the Development of Balance of Labour Resources, Employment and Job Placement of Population".
- Decree of the Cabinet of the Ministers No. 965 of 5 December 2017 "On the Measures for Further Perfection of the Procedure of Establishment and Reservation of Minimum Number of Job Places for the Job Placement of Persons who are in need of Social Protection and Face Difficulties in Searching Employment and Incapable of Competing in Labour Market with Equal Conditions".
- Decree No. 964 of 5 December 2017 "On the measures for Improvement of the Activity of Self-Government Bodies Aimed at Ensuring Employment, firstly for the Youth and Women".

- The Protection of Women Against Harassment and Violence Act (2019).
- The National Human Rights Strategy was approved by Presidential Decree on 22 June 2020. No. PD-6012.
- Law on guaranteeing equal rights and opportunities for women and men (2019).
- The Law on Mediation (2018).
- Law on Public Control (2018).
- Law on Administrative Procedures (2018)

HUMAN RIGHTS

As a member of the United Nations, Uzbekistan supports and implements all the main international instruments of the United Nations relating to the protection of human rights and freedoms, including UN Universal Declaration of Human Rights, Human Rights Council Resolution No. 30/15 on human rights and preventing and countering violent extremism, Convention on the Elimination of all Forms of Discrimination against Women among others.

Uzbekistan's State Policy on human rights is aimed at preventing violations or any restriction on human rights and freedoms and at establishing the necessary organizational, legal, social, economic, spiritual and moral foundations for the protection of human rights.

In 1995-1996, two independent and effective institutions for the protection of human rights were established in Uzbekistan: The Human Rights Commissioner (Ombudsman) of the Oliy Majlis of the Republic of Uzbekistan and the National Centre for Human Rights. In subsequent years, special structures for the protection of human rights were established in various ministries and departments of the Republic of Uzbekistan.

THE PROTECTION OF WOMEN AGAINST HARASSMENT AND VIOLENCE ACT (2019)

The Act defines the various forms of violence - sexual, physical, economic, psychological against women. Protection from harassment and violence is defined as a system of urgent measures of economic, social, legal, organizational, psychological and other nature in order to eliminate the danger to women's life and health, to ensure their safety and to prevent repeated illegal actions against them.

Other relevant legislations include:

- The National Human Rights Strategy was approved by Presidential Decree on 22 June 2020. No. PD-6012;
- Law on guaranteeing equal rights and opportunities for women and men (2019);
- The Law on Mediation (2018);

- Law on Public Control (2018); and
- Law on Administrative Procedures (2018)

EBRD

PR2 is applicable to Labour and Working Conditions and has the following key objectives:

- Respect and protect the fundamental principles and rights of workers;
- Promote the decent work agenda, including fair treatment, non-discrimination and equal opportunities of workers;
- Establish, maintain and improve a sound worker-management relationship;
- Promote compliance with any collective agreements to which the client is a party, national labour and employment laws;
- Protect and promote the safety and health of workers, especially by promoting safe and healthy working conditions; and
- Prevent the use of forced labour and child labour (as defined by the ILO) as it relates to project activities.

Concerning dedicated accommodation, compliance is required with:

- IFC & EBRD Workers Accommodation: Processes and Standards (2009).

In regard to human rights:

- According to EBRD's Environmental and Social Policy, EBRD is committed to the respect of human rights in the Project they finance. EBRD is also guided by the International Bill of Human Rights and the eight core conventions of the International Labour Organization.

ADB

The Environmental Safeguard requirements necessitate the Borrower/client to, '*provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.*'

The ADB Social Protection Strategy requires client to promote efficient labour markets, diminish peoples exposure to risks and comply with core labour standards which includes: (a) freedom of association and the effective recognition of the right to collective bargaining, (b) the

abolition of all forms of forced or compulsory labour, (c) the elimination of discrimination in respect of employment and occupation and (d) the elimination of child labour.

AIIB

ESS1 – Environmental and Social Assessment and Management: Point 8.1 outlines the need to consider worker health and safety in the impact assessment. Section F covers Labour and Working Conditions, including labour management relationships, child and forced labour.

EPFIs

The following applicable IFC Performance Standards aim to identify and ensure that social and economic impacts of a project are addressed in the relevant areas, in particular:

- Performance Standard 2: Labour and Working Conditions;
- In accordance with IFC Performance Standard 2 (Labor and Working Conditions) there is a requirement to align with the following conventions:
- ILO Convention 29 on Forced Labor;
- ILO Convention 87 on Freedom of Association and Protection of the Right to Organize;
- ILO Convention 98 on the Right to Organize and Collective Bargaining;
- ILO Convention 100 on Equal Remuneration;
- ILO Convention 105 on the Abolition of Forced Labor;
- ILO Convention 138 on Minimum Age (of Employment);
- ILO Convention 182 on the Worst Forms of Child Labor;
- ILO Convention 111 on Discrimination (Employment and Occupation);
- UN Convention on the Rights of the Child, Article 32.1; and
- UN Convention on the Protection of the Rights of all Migrant Workers and Members of their Families.
    - In addition, the Project will also be required to adhere to the United Nations Guiding Principles on Business and Human Rights to ensure that it complies with all applicable laws and to respect human rights.

In regard to human rights:

- In line with EP IV requirements, the United Nations Human Rights Guiding Principles (HRGP) apply to the Project. HRGP II on "The corporate responsibility to respect human rights" recognises that it is the responsibility of businesses and

corporations to respect human rights. It is a global standard of expected conduct for all business enterprises wherever they operate. It exists independently of a States' ability and/or willingness to fulfil their human rights obligations and does not diminish those obligations.

The IFC Guidance on GBVH in the Construction Sector is also relevant to Labour and Working Conditions.

IFC Guidance on Gender Based Violence and Harassment (GBVH) in the Construction Sector

The assessment, prevention, monitoring and response measures in regards to GBVH should be underpinned by the following principles:

- Survivor Centered: The rights of GBVH survivors need to be consistently prioritised and used as the starting point for all decisions on efforts to assess, prevent, monitor and respond to GBVH.
- Safe: Survivors, witnesses and those who report and seek to address GBVH can be at risk of retaliation, including threatening and violent behaviour, often from those who do not like their position of power being challenged. Companies should prioritise the safety of those who have experienced, witnessed and reported GBVH.
- Context specific: All measures need to be rooted in a thorough understanding of the local context. Investors and companies should understand the legal and social context and identify the support mechanisms that are in place.
- Collaborative: Companies should seek inputs from a range of internal and external stakeholders to increase the likelihood of broader buy-in and make GBVH prevention more effective.
- Inclusive: Companies should recognise the heightened risks of GBVH faced by certain groups who are subject to discrimination and marginalisation. High risk groups often include people with disabilities, single parents, migrants and ethnic minorities and sexual and gender minorities. The system should also account for illiterate or non-literate people who may not be able to access written information on GBVH reporting mechanisms.
- Integrated: Processes, efforts to assess, prevent, monitor and respond to GBVH needs to be integrated as much as possible into existing processes and management systems, such as occupational health safety, security management systems, environmental and social management systems (ESMS) and human resources (HR) policies and procedures.
- Non-discriminatory: All survivors need to be listened to and treated equally and promote diversity in the workplace.
- Well-informed: Companies should draw on relevant expertise when developing prevention and response measures. The grievances mechanism and investigation procedures should be set up to ensure they are appropriate, relevant and safe in the local context.