

MOLDELECTRICA 



Moldova-Romania Power Interconnection Project

Part 2: Feasibility assessment and ESIA of the second priority project

Component B: Back to Back (BtB) Bălți station and 400kV OHL Bălți – Suceava

Environmental and Social Management and Monitoring Plan

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LIST OF ACRONYMS

BtB	Back-to-Back
E&S	Environmental and social
EBRD	European Bank for Reconstruction and Development
EHS	Environment, Health, and Safety
EMF/EMR	Electromagnetic Field/Radiation
EPRI	Electric Power Research Institute
ESAP	Environmental & Social Action Plan
ESIA	Environmental and Social Impact Assessment Study (or Report)
ESMMP	Environmental and Social Management and Monitoring Plan
ESS	EIB Environmental and Social Standards
IFIs	International Financial Institutions
INCIRP	International Commission on Non-Ionizing Radiation Protection
kV	kiloVolt
LACF	Land Acquisition and Compensation Framework
LACP	Land Acquisition and Compensation Plan
MSDS	Material Safety Data Sheet
NCR	Noncompliance Report
NTS	Non-technical Summary
MD	Republic of Moldova
O&M	Operation and Maintenance
OHL	Overhead Line
OHS	Occupational Health and Safety
OP	World Bank Operational Policy
PIU	Project Implementation Unit
PMU	Project Management Unit
PPE	Personal Protective Equipment
PR	EBRD Performance Requirements

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SEP Stakeholder Engagement Plan

SF₆ Sulphur hexafluoride

USEPA United States Environmental Protection Agency

WHO World Health Organisation

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1. INTRODUCTION

MOLDELECTRICA proposes to upgrade the electricity grid in Republic of Moldova (MD) by developing a new high-voltage transmission line between Bălți and Suceava and a new Back to Back (BtB) station connected to the existing 330/110/10.5 kV Bălți station (“**the Project**”).

Several international financial institutions (IFIs), including the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) are considering providing financing for the project. Therefore, the Project will have to meet not only the environmental and social (E&S) requirements of MD law but also the E&S standards of the IFIs, including EBRD Performance Requirements (2019), and EIB Environmental and Social Standards (ESSs).

The Project includes design, construction, and operation of the following elements:

- New 400 kV OHL Bălți –Suceava route;
- New BtB Bălți station near the existing Bălți station to be connected to the existing 330/110/10.5 kV Bălți station and 330 kV connection between BtB Bălți station and existing Bălți station;
- Modification within the existing 330/110/10.5 kV Bălți station, consisting in extension of the station diagram with a new line cell with 2 breakers per circuit.

The Project’s location is presented in the following figure.

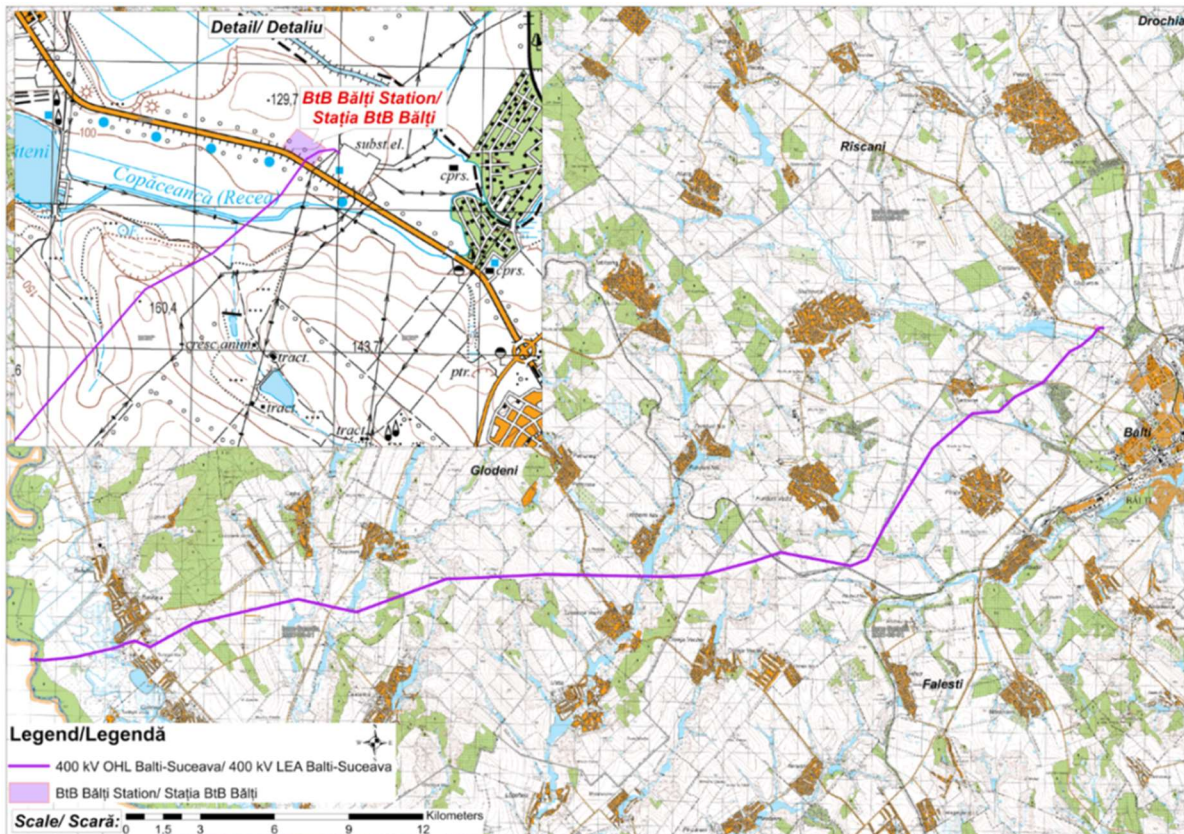


Figure 1. Project's location

For the Project, an Environmental and Social Impact Assessment (ESIA) has been prepared to identify potential environmental and social impacts and measures to avoid, control, or otherwise reduce those impacts to acceptable levels. This Environmental and Social Management and Monitoring Plan (ESMMP) describes the required actions required by the ESIA and how environmental and social impacts will be managed and monitored so they meet the MD requirements law and the environmental and social standards of the IFIs.

These applicable standards include, *inter alia*:

- **MD legal framework:**

- ✓ Law no. 86/2014 on Environmental Impact Assessment and Order no. 1/2019 for the approval of the Guide regarding the environmental impact assessment procedures;
- ✓ Law no. 1515/1993 on Environmental Protection;
- ✓ Law no. 272/2011 on Water;
- ✓ Law no. 1538/1998 on natural areas protected by the State;
- ✓ Law no. 325/2005 related to Republic of Moldova Red Book;

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- ✓ Law no. 94 /2007 on national ecological network;
- ✓ Law no. 439 /1995 on animal regn;
- ✓ Law no. 239/2007 on vegetal regn;
- ✓ Law no. 1531/1993 on cultural heritage protection;
- ✓ Law no. 218/2010 on archaeological heritage protection;
- ✓ Law no. 982/2000 on access to information;
- ✓ Law no. 239/2008 on transparency in decision-making;
- ✓ Land Code no. 828/1991;
- ✓ Law no. 488/1999 on expropriation in case of public utility;
- ✓ Law no. 1308/1997 on land compensation;
- ✓ Forest Code no. 887/1996;
- ✓ GD no. 1170/2016, for approval the procedure for land assignment, change of land use and land exchange;
- ✓ Law no. 186/2008 on Occupational Health and Safety amended by the Law no. 201/28.07.2016;
- ✓ Labor Code of Republic of Moldova no. 154-XV of 28 March 2003.

- **EBRD:**

- ✓ PR1: Assessment and Management of Environmental and Social Risks and Impact;
- ✓ PR2: Labor and Working Conditions;
- ✓ PR3: Resource Efficiency and Pollution Prevention and Control;
- ✓ PR4: Health, Safety and Security;
- ✓ PR5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- ✓ PR6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- ✓ PR8: Cultural Heritage;
- ✓ PR10: Information Disclosure and Stakeholder Engagement;

- **EIB:**

- ✓ ESS 1: Assessment and Management of Environmental and Social Impacts and Risks;
- ✓ ESS 2: Pollution Prevention and Abatement;
- ✓ ESS 3: EIB Standards on Biodiversity and Ecosystems;
- ✓ ESS 4: EIB Climate-related Standards;
- ✓ ESS 5: Cultural Heritage;
- ✓ ESS 6: Involuntary Resettlement;
- ✓ ESS 7: Rights and Interests of Vulnerable Groups;
- ✓ ESS 8: Labor Standards;
- ✓ ESS 9: Occupational and Public Health, Safety and Security;

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✓ ESS 10: Stakeholder Engagement;

- Good international practice (GIP), including World Bank Group Environmental, Health, and Safety (EHS) General Guidelines and EHS Guidelines for Transmission Lines.

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2. ORGANIZATION AND STRUCTURE OF THE PROJECT'S ENVIRONMENTAL AND SOCIAL MANAGEMENT

The Project will be overseen by a **Project Management Unit (PMU)** and directly implemented by a **Project Implementation Unit (PIU)** that will be established within MOLDELECTRICA and dedicated specifically for the Project. The indicative high-level organization of the Project is presented in **Figure 2**.

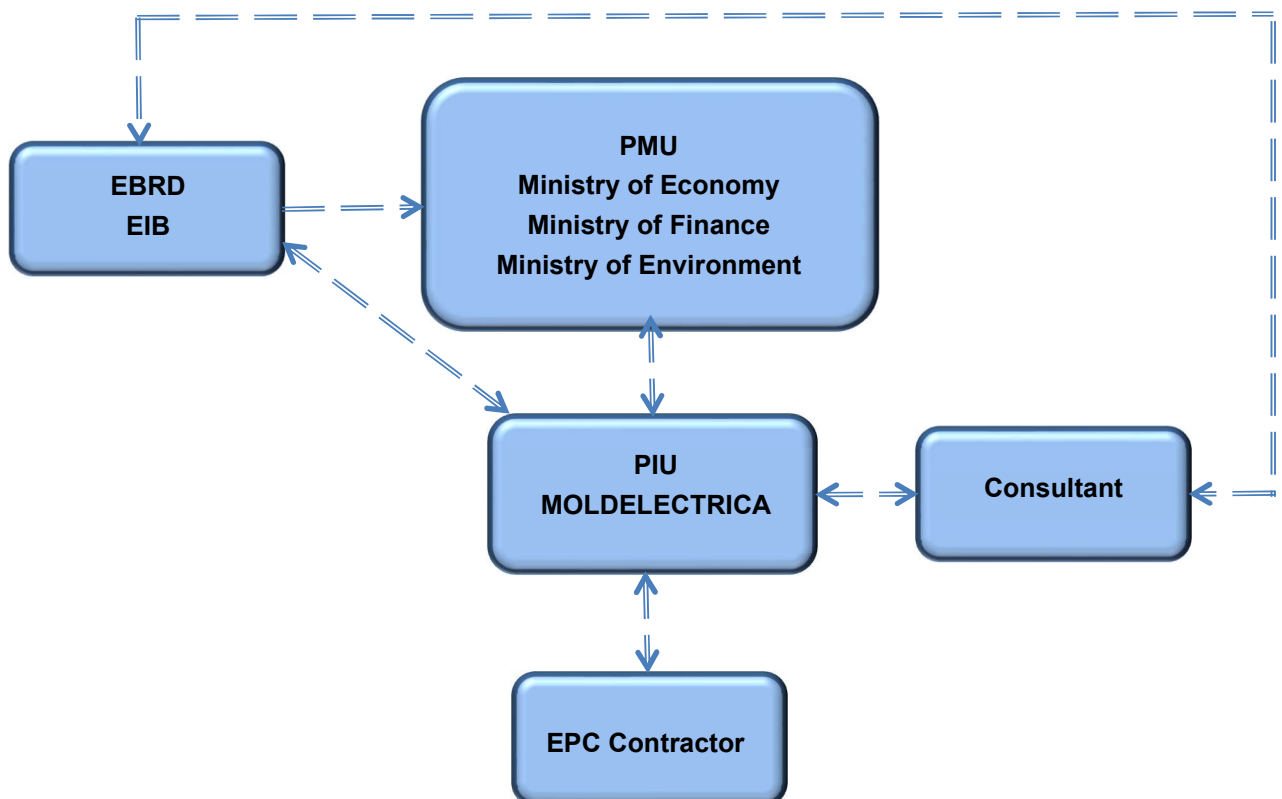


Figure 2. Relationship diagram PMU – PIU – Consultant – General Contractor

PMU coordinates and monitors the evolution of the Project implementation. To this aim, PMU has a direct relation with PIU and financing institutions in order to ensure the necessary framework for the Project achievement at assumed parameters and terms. The PMU will include representatives of the Ministry of Economy, Ministry of Finance, and Ministry of Environment.

The PIU will be responsible for implementing the Project. PIU main responsibilities are coordination, control, monitoring and evaluation of all aspects related to the project implementation including goods, works and services procurement.

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PIU has a direct relation both with MOLDELECTRICA departments and with PMU, Consultant and General Contractor according to the required type of activity / task and the competence level.

PIU main directions of activity are as follows:

- Project general management, activities coordination and checking, strategic decisions monitoring, ensuring the achievement of the obligations of the loan agreement;
- General management and supervision of financial and economic operations;
- Support for the project general organization, general management of goods, works and services procurement according to the financing institution policies and rules;
- Checking the works progress on site and general coordination of design and construction processes, ensurance of the observance of the construction schedule;
- Contract administrative supervision, cooperation with financing banks, supporting procurement and tender processes, period reports on investment work progress, supervision and control of contract financial aspects.

The Project implementation will be ensured by PIU created by MOLDELECTRICA employees and including at least:

- Project Manager;
- Project Manager assistant;
- Technical and Environmental Expert;
- Technical Experts;
- Procurement Expert;
- Financial Expert;
- Communication / Information Expert.

PIU members will work closely with MOLDELECTRICA specific departments, namely:

- *Financial and Economic Department* – administration of project financial matters, ensurance of the conformity with the financial agreements by the Beneficiary, cooperation with the governmental relevant authorities;
- *Legal Department* – legal support and approval on the project, proposal related to legal options and supervision of contract requirements;

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- *Investment Division* - preparing and supervision of design and execution processes, planning and investment execution monitoring, of design and execution documentation, issues on lands;
- *OHL Department* – supervision of 400kV OHL construction process , approval of technical aspects, checking the conformity of the execution with the Project technical requirements by the contractor;
- *Power Station Department* - supervision of BtB Bălți station construction process, including modification works within the existing Bălți station, approval of technical aspects, checking the conformity of the execution with the Project technical requirements by the Contractor;
- *Accounting and Reporting Department* - support for the Project audit, accounting and payment of loan obligations.

A project **Support Team** will be necessary to ensure the achievement of the tasks related to technical, legal and administrative assistance as well as other tasks according to the requirements occurred during the Project implementation.

The Consultant will grant technical assistance to PIU for the Project implementation, concerning all issues related to public procurement, contract administration and management, supervision of design activity, project performance activity as well as payments during contract progress.

PIU structure is presented in the following figure.

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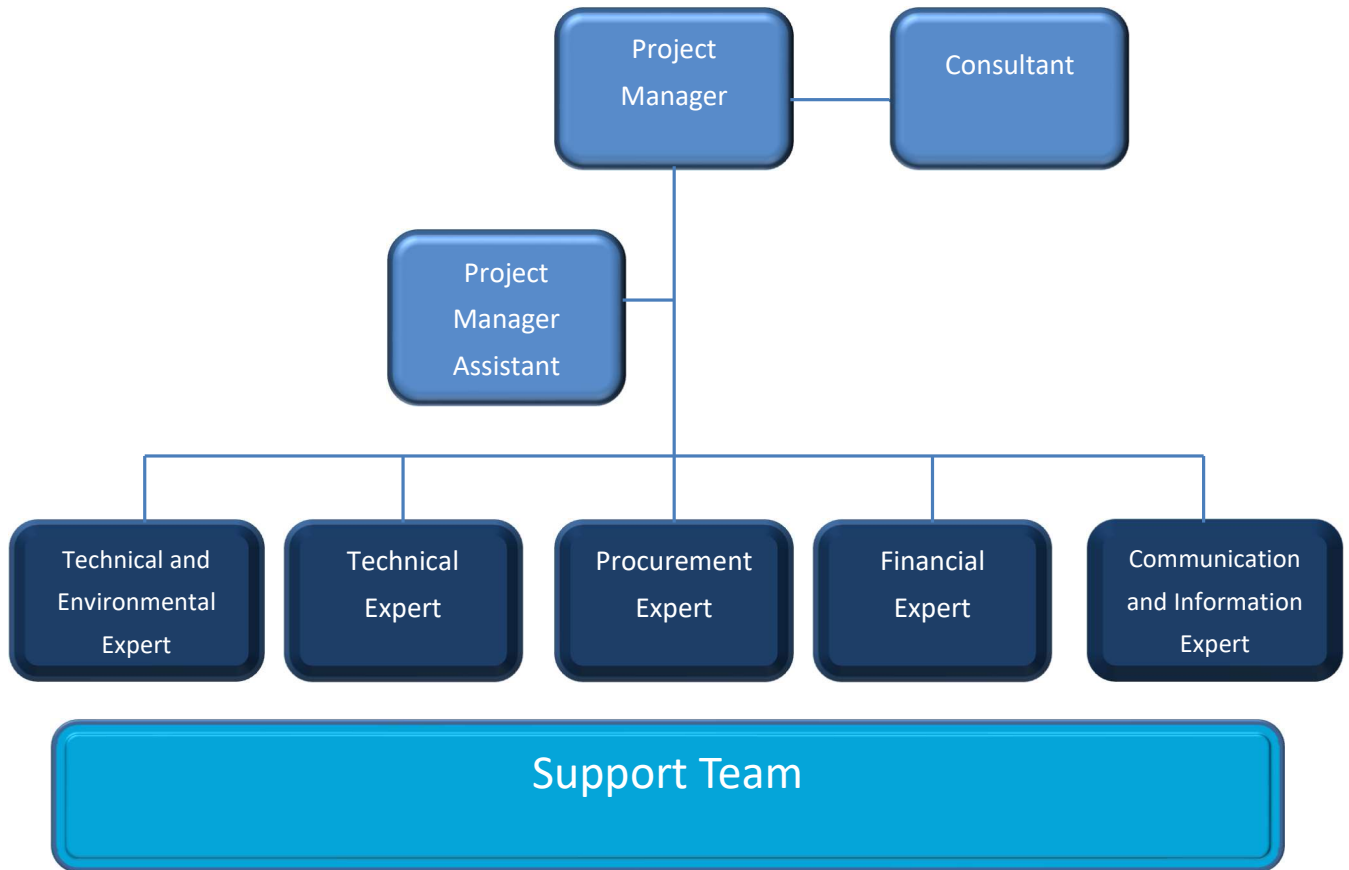


Figure 3. PIU Diagram

Implementation of the requirements of the ESMMP will be the responsibility of the following individuals and organizations. MOLDELECTRICA may employ experts directly or procure the services of consultants to fill certain responsibilities.

Within the PIU:

- The Technical and Environmental Expert will be responsible for overseeing implementation of most ESMMP requirements, with the exception of the SEP, LACP and grievance mechanism. The Technical and Environmental Expert will report to and advise the Project Manager and will communicate regularly with the consulting engineer's Resident Engineer and environmental expert(s), and with the Contractor through the consulting engineer. The Technical and Environmental Expert will also have primary responsibility for preparing E&S reports for submission to Lenders, including coordinating input from Land Acquisition/Social Expert and Safety Expert; The Technical and Environmental Expert will rely on the following technical subordinated expert(s) from the support team:

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- ✓ Technical Expert(s) - Land Acquisition / Social Expert will have primary responsibility for preparing (or coordinating consultant¹ preparation of) the LACP, and then overseeing Plan implementation. This expert will also prepare summaries of land acquisition, compensation payments, for inclusion in reports to the Lenders;
- ✓ Technical Expert - Safety Expert will coordinate with the consultant's and contractor's safety managers to ensure the Occupational Health and Safety Plan and Traffic Management Plans, and Emergency Preparedness and Response Plan are kept up to date and fully implemented. The Safety Expert will also compile data from the Consulting engineer and the Contractor for inclusion in reports to the Lenders;
- The Communication and Information Expert will have primary responsibility for leading implementation of the SEP, including the management of the grievance mechanism for any concerns and complaints particularly from affected stakeholders and communities. This expert will also prepare summaries of grievances and implemented corrective actions, and stakeholder engagement activities for inclusion in reports to the Lenders.

These PIU experts will participate in Project progress meetings and advise the Project Manager on environmental, health and safety, and social issues.

Within **the Consultant** (also known as the consulting engineer, or supervising engineer) organization, one or more environmental, safety, and social experts will have the following responsibilities:

- Day-to-day supervision of the contractor's implementation of the ESMMP and of associated E&S management plans (OHS plan, waste management plan, etc.—required plans are listed in the next section), including preparing inspection protocols, conducting inspections, reviewing reports, assessing compliance with applicable standards, advising contractor's E&S experts
- Recordkeeping and preparation of relevant sections of progress reports, based on reports from the contractor and direct observation;
- Advising the Resident Engineer of deficiencies in Contractor implementation of the ESMMP and of actions required to regain compliance, including preparation of compliance schedules;

¹ This refers to an individual or firm with expertise in land acquisition, livelihood restoration, and other relevant topics, including the requirements for MD law and the IFI's standards, and not to the consulting engineer (who is referred to elsewhere as the Consultant).

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- Making recommendations to the Resident Engineer for issuing noncompliance reports (NCRs) in case of continuing or serious noncompliance with contract requirements related to environmental, health and safety, and social performance, including timebound compliance actions and warnings of temporary or permanent penalties in case of continued noncompliance.

Within the Contractor's organization:

- One or more full-time environmental experts will oversee Contractor and subcontractor managers' and work crews' implementation of ESMMP requirements and will lead training of workers and supervisors in E&S matters. Responsibilities will include regular inspections of all work sites, advising the contractor's project manager and supervisors of measures needed to improve E&S performance, keeping records and submitting reports on E&S matters for inclusion in project progress reports. The environmental expert(s) will also assist the safety expert(s) in overseeing worker and site safety and compliance with the *OHS and Traffic Management Plans*.
- One or more full-time safety experts will have primary responsibility for overseeing implementation of the OHS Plan, the *Traffic Management Plan*, and the *Emergency Preparedness and Response Plan*. This will include managing stores of personal protective equipment (PPE) and safety equipment, preparing materials and training workers and supervisors (including those of the contractor and the consulting engineer) in task hazards and safety measures, inspecting safety conditions and safety equipment at all work sites, enforcing use of PPE and safety equipment, advising contractor managers and supervisors of measures needed to improve worker and community health and safety, investigating near misses and incidents, compiling statistics as required by the OHS plan, and providing safety-related input to progress reports.

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3. REQUIREMENTS FOR MANAGEMENT AND MONITORING OF ENVIRONMENTAL AND SOCIAL PERFORMANCE

This section summarizes specific requirements to avoid or mitigate potential environmental and social impacts required by the ESIA and the applicable standards. This ESMMP is considered to be a “living” document that will be updated throughout construction, operation, and decommissioning of the project as needed to ensure compliance with the applicable standards. The ESMMP requires that a number of more detailed E&S management plans and programmes be prepared, including²:

- *Occupational Health and Safety Plan;*
- *Emergency Preparedness and Response Plan;*
- *Traffic Management Plan;*
- *Land Clearing, Erosion Control, and Site Restoration Plan;*
- *Land Acquisition and Compensation Plan;*
- *Chance Find Procedure;*
- *Air Quality Management Plan/Procedure;*
- *Noise & EMF Control Plan/Procedure;*
- *Waste and Materials Management Plan;*
- *Spill Prevention and Response Plan;*
- *Work Camp Management Plan (including accommodations plan if workers are to be accommodated);*
- *Worker Code of Conduct;*
- *Construction and Post-Construction Bird Monitoring Programs;*
- *Vegetation Management Plan.*

These plans and programs are considered to be part of this ESMMP and will be prepared and approved prior to construction, or as otherwise indicated. The PIU will be responsible for preparing these plans, engaging external experts and consultants (again, not the consulting engineer) to prepare them, or requiring the construction contractor to engage experts/consultants to prepare them. Any or all of the Plans are subject to review by the Lenders, at the Lender’s discretion. If prepared by external consultants or the contractor(s), they will be approved by PIU following review by persons with suitable expertise. It is important to note that many of the Plans,

² As needed, the contractor may prepare method statements or procedures to implement specific requirements of the various management plans. Any such statement or procedure will be approved by the consulting engineer prior to implementation.

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including the LACP, the erosion control plan, and chance find procedure, will require surveys and/or other significant activities to be completed before construction can begin.

Each of these E&S management plans/procedures will include the following:

- Identification of who (that is, what positions) within the Contractor, consulting engineer, and PIU organization(s) will be responsible for ensuring the requirements are implemented;
- The applicable standards – including MD law, IFIs requirements, and good international practice – that are required to be met. In case of conflict or inconsistency, the most stringent standard is to be followed unless that is in explicit violation of MD law, in which case MD law will apply;
- Requirements for training supervisors and workers in their responsibilities for implementation, supervision, and reporting on performance/compliance;
- Recordkeeping, monitoring, and reporting requirements for the contractor(s), the consulting engineer, and the PIU, including (for each party) what is to be monitored, how and when it is to be monitored, and potential actions to be taken in case of noncompliance.

In addition, the PIU will require that the contractor compile all training requirements into a single training plan and that the consulting engineer supervise implementation of this plan.

Besides the E&S plans, the PIU will also ensure that the Project's Procurement Plan includes requirements to include E&S requirements and relevant contract management requirements, into tender documents and contracts for the construction contractor and the Consultant.

The table below outlines management and monitoring requirements, organized by EBRD Performance Requirement. The table describes actions to be taken, the party primarily responsible, the measure of completion and the timeframe for implementation.

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
Assessment and Management of Environmental and Social Risks and Impacts				
1.	Establish Project Management Unit (PMU) to be responsible for: <ul style="list-style-type: none"> • Coordinating and monitoring of Project implementation on behalf of Government; • Maintaining communications with national and international bodies involved and monitor PIU activity. 	<ul style="list-style-type: none"> • PMU in place 	<ul style="list-style-type: none"> • Ministry of Economy 	<ul style="list-style-type: none"> • As required by financing agreements • Prior to signing of MoU between MOLDELECTRICA and CNTEE Transelectrica SA
2.	Establish Project Implementation Unit (PIU) to manage implementation of the Project, including the ESMMP and associated plans.	<ul style="list-style-type: none"> • PIU in place 	<ul style="list-style-type: none"> • MOLDELECTRICA 	<ul style="list-style-type: none"> • Establish: as required by financing agreements
3.	Develop Procurement Plan , to include requirements: <ul style="list-style-type: none"> • For tender documents and contracts for design and construction contractors and for consulting engineers to include (specifically or by reference) (a) the ESIA and this ESMMP, (b) clauses that explicitly require contractors to comply with ESIA and ESMMP; requirements and applicable standards and (c) explicit statement that consulting engineers will be responsible for supervision of E&S performance; • For tender documents and contracts for contractors and consulting engineers to require environmental, social, and safety experts be identified as key persons, with minimum qualifications for these positions; • For contractor tender documents and contracts to explicitly state that E&S performance/compliance is an integral part of technical performance and that payments may be withheld in case of noncompliance, whether temporarily until compliance is achieved, or possibly permanently in case of continued noncompliance or if noncompliance adversely affects people or the environment; • For tenders and contracts for consulting engineers to 	<ul style="list-style-type: none"> • Plan approval by Lenders • E&S qualifications considered in contractor and Consultant selection • E&S-qualified contractors and consulting engineers • Contracts with enforceable E&S provisions 	<ul style="list-style-type: none"> • PIU 	<ul style="list-style-type: none"> • Submission to Lenders: 30 days prior to requests for tenders • Approval by Lenders: prior to requests for tenders and awards of contracts

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	include responsibility for monitoring E&S compliance and requiring actions in case of noncompliance, including withholding payments temporarily or permanently; <ul style="list-style-type: none"> For the evaluation and selection of contractors and consulting engineers to include consideration of (a) qualifications of proposed E&S experts and (b) past performance relevant to compliance with E&S requirements. 			
4.	Appoint managers/staff with expertise and experience in managing and overseeing environmental, social, land acquisition & livelihood restoration, safety, and communications performance to implement and oversee implementation of this ESMMP and applicable standards.	Qualified managers/staff in all organizations	<ul style="list-style-type: none"> PIU, consulting engineer, and Contractor(s) 	<ul style="list-style-type: none"> PIU: within 30 days of PIU establishment Consulting engineer & contractor(s): immediately upon contract award
5.	Obtain all environmental permits and approvals.	No work performed without authorization	<ul style="list-style-type: none"> PIU 	<ul style="list-style-type: none"> Prior to financial close
6.	Develop and implement Decommissioning Plan for any project element(s) to be taken out of service, to include requirements for worker safety, waste management, future land uses and restrictions, site restoration, noise and air emissions control, traffic management, notice to and consultation with authorities, and independent confirmation of successful decommissioning.	<ul style="list-style-type: none"> Plan approval Sites restored to beneficial uses 	<ul style="list-style-type: none"> Plan development: PIU Plan implementation: Contractor Confirmation: independent consultant 	<ul style="list-style-type: none"> Plan approved prior to start of decommissioning
Labor and Working Conditions				
7.	Develop and implement Work Camp Management Plan (including major storage/laydown areas), to include requirements / definitions as needed for: <ul style="list-style-type: none"> Delineation of the boundaries of work areas and roads; 	Plan developed and approved Work camp O&M according to Plan	<ul style="list-style-type: none"> Plan development: PIU or Contractor Plan 	<ul style="list-style-type: none"> Prior to construction

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	<ul style="list-style-type: none"> • Definition and marking of discrete areas within the boundaries (e.g., accommodations, vehicle maintenance, fuel storage, materials storage, waste storage, offices, materials storage, etc.); • Separation of accommodations (if any) and maintenance/storage areas; • Hours and curfews; • Security and access control; • Fire safety; • Requirements for sanitation, potable water, site maintenance; • Requirements for gray water and sewage management; • Accommodations management (if the camp includes accommodations). 		implementation: Contractor	
8.	Establish goals for contractors to hire local workers, with priority for affected people, and require contractors to provide skills training and to report on workforce composition in terms of local vs nonlocal vs expat. Provide for bonus/reward for meeting and exceeding goals.	<ul style="list-style-type: none"> • Local hires • Increased skills 	<ul style="list-style-type: none"> • PIU: to establish goals • Contractor: to hire 	<ul style="list-style-type: none"> • Goals established: at time of tender requests
Resource Efficiency and Pollution Prevention and Control				
9.	Develop and implement Waste and Materials Management Plan (separate plans or sections for construction vs operation, OHL vs BtB station), to include: <ul style="list-style-type: none"> • Identification of and estimated amounts of materials to be used and wastes to be generated; • Prohibition on use of transformers that contain polychlorinated biphenyls (PCBs) in transformer oils; • MSDS/fact sheets for all hazardous materials/wastes (fuels, lubricants, fluorescents, paints, epoxies, etc.); 	<ul style="list-style-type: none"> • Plan(s) approved and implemented • All materials and wastes managed according to applicable standards • No uncontrolled 	<ul style="list-style-type: none"> • Plan development: PIU and/or Contractor • Plan implementation in construction period: Contractor • Implementation in O&M period: PIU 	<ul style="list-style-type: none"> • Approval: prior to relevant phase and location (construction vs operation, OHL vs BtB station) • Implementation: throughout relevant phase

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	<ul style="list-style-type: none"> • Methods and locations for storing and using each type of wastes and material; • Rules for fueling (designated locations, > 50m from water, over impervious surface); • Use of licensed waste haulers; • Permits for waste storage and disposal as required; • Methods of storage and disposal of sanitary sewage (>50m from water, licensed haulers); • Local and national permitting requirements. 	<p>releases of wastes or materials</p>		
10.	<p>Develop and implement Wastewater Management Plan/Procedure (separate plans or sections for construction vs operation, OHL vs BtB station), to include:</p> <ul style="list-style-type: none"> • Identification of waste streams, including sewage, gray water at camp(s), vehicle/equipment wash water, concrete wash water; • Evaluation of suitability of, and rules for, wastewater use for vehicle/equipment washing, dust control, and other beneficial purposes; • Treatment as necessary to meet standards for use or discharge; • Discharge only as authorized by permit. 	<ul style="list-style-type: none"> • No uncontrolled/unauthorized wastewater emissions • Maximize beneficial use of wastewater 	<ul style="list-style-type: none"> • Plan development: MOLDELECTRIC A or Contractor • Plan implementation: Contractor (construction) and MOLDELECTRICA (O&M) 	<ul style="list-style-type: none"> • Approval: prior to relevant phase and location (construction vs operation, OHL vs BtB station) • Implementation: throughout relevant phase
11.	<p>Develop and implement Land Clearing, Erosion Control, and Site Restoration Plan, to include requirements for:</p> <ul style="list-style-type: none"> • Marking and keeping works within boundaries, including temporary roads and tracks; • Prohibition of off-road vehicle and equipment movement; • Removal and storage of topsoil in secure locations (no topsoil wastage) with erosion controls; • Storage and disposal of spoil in designated locations with erosion controls; 	<ul style="list-style-type: none"> • Plan developed and approved • No working outside boundaries • No loss of topsoil • No uncontrolled run-off, minimal erosion 	<ul style="list-style-type: none"> • Plan development: PIU or Contractor • Plan implementation: Contractor 	<ul style="list-style-type: none"> • Plan approved prior to construction • Plan implemented throughout construction • Sites monitored until vegetation meets restoration goals

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	<ul style="list-style-type: none"> • Planning for stable configuration (maximum grades, revegetation, etc.) of temporary and permanent spoil dumps; • Adoption of rules to maximum beneficial use of spoil (as fill, in concrete, etc.); • Use of best-practice erosion control measures, including silt fences, drainage control, flow retardation structures, settling ponds, etc.; • Inspections after heavy rainfall events, immediate repairs to erosion controls as needed • Restoration of disturbed areas (tower locations, temporary roads, others) immediately after local construction is complete: grading, topsoil replacement, seeding/planting, monitoring; • Program for monitoring revegetation in non-agricultural areas until 75%+ vegetative cover is self-sustaining. <p>Plan is to apply to all works that involve vegetation removal, excavation or grading, and earth moving.</p>	<p>sedimentation</p> <ul style="list-style-type: none"> • Disturbed areas restored to productive use immediately after disturbance 		
12.	<p>Develop and implement Procedure/Plan for Working Near Water, to include:</p> <ul style="list-style-type: none"> • No towers or work activities within 5m of standing or moving surface water; • No vehicles or equipment to work in or cross standing or moving water or wetlands; • Minimal disturbance and immediate restoration of stream banks; • Safety training and equipment (e.g., life rings, barriers, no working alone) for workers who work near ponds/lakes or rivers (see Occupational Health and Safety Plan below). 	<ul style="list-style-type: none"> • Minimal disturbance of banks • No water contamination • No worker incidents 	<ul style="list-style-type: none"> • Plan development: PIU or Contractor • Plan implementation: Contractor 	<ul style="list-style-type: none"> • Plan approved prior to construction • Plan implemented throughout construction

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
13.	Develop and implement Air Quality and Emissions Management Plan/Procedure(s), to include: <ul style="list-style-type: none"> • Requirements for dust control in dry conditions, including continual observations and wetting or other controls in case of visible dust; • Reduced speed on dusty roads; • Covers on earthen/dusty loads; • Maintenance of all vehicle and equipment engines per manufacturers' instructions; • Immediate removal from service and repair of any vehicle or equipment emitting black smoke; • Prohibition of trash-burning and other open fires; • Inspect and maintain SF₆-containing equipment according to MD law, manufacturer's specifications, and good international practice (e.g., programs recommended by EPRI, WB, ABB Group, UK National Grid, etc.) 	<ul style="list-style-type: none"> • Plan approved • No visible dust • Minimum emissions of pollutants and GHGs 	<ul style="list-style-type: none"> • Plan development: MOLDELECTRICA or Contractor • Plan implementation: Contractor, except MOLDELECTRICA for SF₆ requirements 	<ul style="list-style-type: none"> • Plan approval: prior to construction (or substation commissioning, in the case of SF₆) • Implementation: throughout relevant phase
14.	Develop and implement Plans/Procedures for Noise and EMF Control, to include: <ul style="list-style-type: none"> • Noise and EMF: Monitoring at residences or other sensitive locations upon request of potentially affected parties (either monitoring protocols or arrangements for consultant services); • Noise: Working on weekends or outside daylight hours only after consultation with local authorities and notice to residents; • Noise: good-practice mitigation measures (engine maintenance, limits on air brakes, careful dumping, mufflers on engines, sound barriers, etc.); • Rules for reducing noise and/or EMF in case monitoring shows exceedances of MD or international standards (ICNIRP, WHO, WBG EHS Guidelines, etc.) 	<ul style="list-style-type: none"> • Plan for noise: prior to construction • Plan for EMF: prior to OHL and BtB station commissioning 	<ul style="list-style-type: none"> • Noise protocols: MOLDELECTRICA or Contractor • Noise implementation: Contractor (construction) & MOLDELECTRICA (operation) • EMF protocols & implementation: MOLDELECTRICA 	<ul style="list-style-type: none"> • Noise: prior to construction • EMF: Prior to commissioning of OHL and BtB station

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
15.	Develop and implement Spill Prevention and Response Plan (separate plans or sections for OHL vs BtB station, construction vs operation), to include: <ul style="list-style-type: none"> • Fuel and hazardous materials storage and use in designated locations with impervious surfaces with containment capacity at least 110% of volume stored; • Immediate removal from service of equipment and vehicles with evidence of leaking fuel or oil; • Spill kit and training in use at all work sites; • Containers for contaminated soil and cleanup media. 	<ul style="list-style-type: none"> • Plan approved • Spills contained and cleaned up immediately 	<ul style="list-style-type: none"> • Plan development: PIU or Contractor • Plan implementation: Contractor (construction) & MOLDELECTRICA (operations) 	<ul style="list-style-type: none"> • Plan approved: prior to construction • Spill cleanup: immediately • Plan implemented: throughout construction and operation
Health, Safety and Security				
16.	Develop and implement Occupational Health and Safety Plan for construction and for operation (separate plans or sections for construction vs operation, OHL vs BtB station), to include: <ul style="list-style-type: none"> • Job hazard analysis for all tasks; • Defined hazard controls for all tasks, with PPE as last resort; • Training program, including induction training for all workers and visitors, training on safe work practices and conditions for all workers, periodic refresher training, toolbox training; • Special training for workers with high-hazard tasks/locations: working at heights, in/near excavations, with electricity, with hazardous materials/wastes, with heavy equipment; • Special training for supervisors and foremen, first aiders; • PPE requirements for all workers and visitors; • Formal and informal safety monitoring of work practices and site conditions; • Enforcement of PPE use, work practices, and site 	<ul style="list-style-type: none"> • Approved OHS Plan • Trained workers • 100% PPE use • Zero accidents and incidents 	<ul style="list-style-type: none"> • Plan development: PIU or Contractor • Plan implementation: all parties 	<ul style="list-style-type: none"> • Construction-period plans approved prior to construction • Operations-period plans approved prior to commissioning • Annual reviews and revisions as needed

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	<ul style="list-style-type: none"> conditions; • Procedures for responses to accidents with injuries or fatalities; • First aid kits and at least one trained first aider at all OHL work sites, kits and at least two first aiders at substation sites; • Recordkeeping requirements, including hours worked, near misses, injuries, fatalities, root cause investigation results; • Contact information for first responders, hospitals, medical providers, site and corporate managers; • Annual reviews and updates of Plan as needed; • Regular reporting to project and corporate management, authorities, & Lenders, and immediate reporting of serious injuries and fatalities to Lenders and authorities. 			
17.	<p>Develop and implement Emergency Preparedness and Response Plan (separate plans or sections for construction vs operation, OHL vs BtB station) to include:</p> <ul style="list-style-type: none"> • Identification of types of emergencies and means to reduce probability of occurrence and severity; • Organization and identification of response teams; • Response procedures (evacuation, management notice, communications, etc.); • Location of firefighting and other emergency response equipment and supplies; • Inventory of flammable and hazardous materials; • Assessment of vulnerability of towers and substations to flood, wind, fire, and assessment of need to include adaptation/resilience measures to designs and/or maintenance procedures; • Contact information for police, emergency responders, 	<ul style="list-style-type: none"> • Plan approved • Minimum number of emergencies • Orderly responses to emergencies they occur 	<ul style="list-style-type: none"> • Plan development: MOLDELECTRICA or Contractor • Plan implementation: Contractor (construction) & MOLDELECTRICA (operations) 	<ul style="list-style-type: none"> • Plan approved: prior to relevant phase • Plan implemented: throughout relevant phase

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	local/District/national authorities, medical providers/responders.			
18.	Develop and implement Traffic Management Plan , to include: <ul style="list-style-type: none"> • Speed limits (and engine controls, as needed); • Minimum driver qualifications; • Driver training; • Special requirements for oversize and special loads (routes, times, etc., in order to minimize disruption); • Consultations with and notice to authorities and nearest residences before working near populated areas; • Contact information for traffic authorities, police, and medical providers/responders; • Requirements for warning signs and controls (lights, flagmen, signs) at access points on public roads. 	<ul style="list-style-type: none"> • Plan approved by traffic/road authorities • No accidents • Minimal disturbance to normal traffic 	<ul style="list-style-type: none"> • Plan development: PIU or Contractor • Plan implementation: Contractor 	<ul style="list-style-type: none"> • Plan approval: prior to construction • Implementation: throughout construction
19.	Develop and implement measures to minimize risk to local communities, to include: <ul style="list-style-type: none"> • Access controls at all work sites and camps, and at substations (fences, guards, barriers, signs, as needed to control access); • Measures to discourage/prevent climbing on towers; • Consultation with local authorities on hazards, materials, and training programs for schools. 	<ul style="list-style-type: none"> • No uncontrolled access to sites 	<ul style="list-style-type: none"> • Construction: Contractor • Operation: MOLDELECTRICA 	<ul style="list-style-type: none"> • Throughout construction and operation
20.	Establish goals for contractor procurement of local firms and services, with rewards for achieving goals.	<ul style="list-style-type: none"> • Number of contracts with local firms/ services 	<ul style="list-style-type: none"> • PIU 	<ul style="list-style-type: none"> • Establish goals: prior to tendering
Land Acquisition, restriction on Land Use and Involuntary Resettlement				
21.	Initiate procedure and take the necessary steps to have Project declared as being in the “national interest”.	Project declared in national interest	<ul style="list-style-type: none"> • Ministry of Energy & 	<ul style="list-style-type: none"> • Declaration at least 12 months prior to

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
			MOLDELECTRICA	construction
22.	Establish goals for contractors to hire local workers, with priority for affected people, and to provide skills training, and including requirements to report on workforce composition in terms of local vs nonlocal vs expat. Provide rewards/bonus for meeting and exceeding goals.	<ul style="list-style-type: none"> • Local hires • Increased skills 	<ul style="list-style-type: none"> • PIU: to establish goals • Contractor: to hire 	<ul style="list-style-type: none"> • Goals established: at time of tender requests
23.	Appoint qualified expert(s) to prepare and oversee implementation of Land Acquisition and Compensation Plan in accordance with LACF, relevant applicable IFIs standards, and MD law, including <i>inter alia</i> : <ul style="list-style-type: none"> • Census, cadastral work, and other activities needed to identify and value owners and assets; • Replacement or compensation for losses at full replacement cost; • Compensation for economic displacement for loss of land and use by owners and users, including unauthorized users; • Compensation for damage to crops and land, and for livestock death or injury; • Compensation audit at completion of land acquisition and compensation; • Consultation with affected parties. 	<ul style="list-style-type: none"> • Plan agreed with IFIs • Land acquired • Compensation at replacement cost 	<ul style="list-style-type: none"> • Appointment & compensation: PIU • Plan preparation: external expert • Audit: independent expert 	<ul style="list-style-type: none"> • Full compensation for land and economic displacement prior to construction start • Audit complete: 90 days prior to construction start
Biodiversity Conservation and Sustainable Management of Living Natural Resources				

Table 1. Environmental and Social Management and Monitoring Requirements

Action no.	Action	Monitoring/ Performance indicators	Entity responsible	Timetable
24.	Implement recommendations of the “Biodiversity Impacts Assessment Report for the BtB station and 400 kV OHL Bălți-Suceava Project”.	<ul style="list-style-type: none"> Recommendations implemented, minimal bird disturbance and morality 	<ul style="list-style-type: none"> Construction: Contractor Operation: MOLDELECTRICA 	<ul style="list-style-type: none"> As recommended in report unless otherwise specified in actions below
24 a	Install and maintain bird indicators that can be located at a distance of 20÷25 m away from each other on the line between the towers and protective devices for birds against electrocution in air pockets and on the towers’ exterior face in the zones mentioned in ESIA. Note: The type of indicator and protective devices, as well as their placement will be verified by an expert	<ul style="list-style-type: none"> Diversers installed, overseen by expert 	<ul style="list-style-type: none"> Install: Contractor Maintain/ replace: MOLDELECTRICA 	<ul style="list-style-type: none"> Install: as power lines are suspended from towers Maintain/replace: throughout construction
24 b	Appoint qualified expert to identify towers where nesting platforms could be placed on towers to support nesting of Saker falcons (<i>Falco cherrug</i>) and other species. Place nesting platforms as recommended. Note: the nest sites and their configuration shall be determined by experts.	<ul style="list-style-type: none"> Nesting platforms placed Successful use of platforms by Saker falcons and other species of concern 	<ul style="list-style-type: none"> Appoint expert: PIU Install platforms: contractor 	<ul style="list-style-type: none"> Identify towers: prior to final approval of design Install platforms: at time of tower construction
24 c	Appoint experts to design and implement a Bird Monitoring Program for migrating and resident birds during construction period to verify and update findings and conclusions of prior assessment, to include: <ul style="list-style-type: none"> Monitoring protocols (observation methods, timing and frequency, locations, reporting, etc.); Surveys during migration and nesting/fledging seasons; Annual reports on annual and cumulative findings, including possible changes in conclusions of prior assessments and recommendations for changes in 	<ul style="list-style-type: none"> Program developed and implemented Current understanding of risk confirmed or refined Additional mitigation defined and implemented, if 	<ul style="list-style-type: none"> Appointment of experts: PIU Program development: Expert Program approved: Independent Expert Program implemented: team of experts Reviews of results: 	<ul style="list-style-type: none"> Experts appointed: 90 days prior to construction Program developed and approved: prior to construction Program implemented: from approval through end of construction

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Action no.	Action	Monitoring/ Performance indicators	Entity responsible	Timetable
	mitigations. Reports to be reviewed by independent expert approved by Lenders.	needed	Independent Expert • Implementation of changes to mitigations: PIU/ MOLDELECTRICA	
24 d	Appoint experts to develop and implement a Post-Construction Monitoring Program to assess bird mortality along OHL route, with priority for diverter-marked spans and natural protected sites, to include: • Monitoring protocols (methods, timing, locations, reporting, etc.); • Defining adjustments to mortality statistics based on probability of carcass scavenging; • Establishing thresholds for determining need for further mitigation/compensation/offsets; • Annual reviews and reports of current and cumulative results; • As needed, recommendations for changes in mitigation measures (modifications to specific towers, change type or increase numbers of diverters, nesting platforms, offsets, etc.); • Threshold for determining need for continued monitoring in case of uncertainty of conclusions • Program and reports to be reviewed by independent expert approved by Lender.	<ul style="list-style-type: none"> • Program developed and implemented • Mortality accurately assessed • Additional mitigation defined and implemented as needed 	<ul style="list-style-type: none"> • Appointment of experts: PIU • Program development: Expert • Program approved: Independent Expert • Program implemented: Expert • Reviews of results: Independent Expert 	<ul style="list-style-type: none"> • Program developed and approved: prior to OHL commissioning • Monitoring: During first three years of OHL operation, or until experts determine risk is sufficiently understood and mitigated
25.	For the towers to be placed in the Pădurea Domnească Protected Natural Area, the affected areas shall be agreed upon by the ones responsible for the management of the protected area, in such a way that the areas affected are minimal and do not endanger the nesting of important species or populations of important	<ul style="list-style-type: none"> • Experts appointed • Surveys conducted • Impacts avoided/ minimized 	<ul style="list-style-type: none"> • Appoint: PIU • Surveys: experts • Tower location: PIU & Contractor • Changes to construction 	<ul style="list-style-type: none"> • Conduct surveys within 90 days of construction start for individual towers

Table 1. Environmental and Social Management and Monitoring Requirements

Action no.	Action	Monitoring/ Performance indicators	Entity responsible	Timetable
	<p>species dependent on the ecosystem. Also, qualified experts shall be appointed to conduct preconstruction surveys to identify need for limiting construction during certain times, seasons, or areas in order to minimize impact on fauna species of conservation concern (IUCN or MD Red List), and whether micro-location of towers is needed to avoid impact on plants of conservation concern (MD Red List).</p>		<p>schedules: Contractor</p>	
26.	<p>Inform the Lenders on an annual basis, based on annual reports prepared under action 24c and 24d, whether results of monitoring program (action 24c) and mortality monitoring (action 24d) show likelihood or existence of adverse impacts on Emerald Areas, IBAs, and/or protected species. If impacts are likely or present:</p> <ul style="list-style-type: none"> • Prepare and submit for Lenders' approval a Biodiversity Action Plan (BAP) that meets the requirements of EBRD; • Plan to include site-specific measures (such as moving tower locations, seasonal restrictions on activities at specific locations, enhancements or additions to habitat, etc.) to achieve no net loss/net gain of priority biodiversity features or habitat, as defined in EBRD PR6 (also see EU Habitats and Birds Directives); • Plan to be approved by Lenders and authorities. 	<ul style="list-style-type: none"> • Annual assessments and reports to Lenders • BAP submission in case of impacts 	<ul style="list-style-type: none"> • PIU 	<ul style="list-style-type: none"> • As part of annual E&S report submitted to Lenders
27.	<p>Develop and implement a <i>Vegetation Management Plan</i> in order to:</p> <ul style="list-style-type: none"> • Minimize O&M tree-cutting within working corridor; • Define proper methods for vegetation clearance and tree cutting as part of right-of-way maintenance, including no use of herbicides; • Schedule vegetation maintenance activities to 	<ul style="list-style-type: none"> • Plan developed and approved • Minimal cutting and associated income loss 	<ul style="list-style-type: none"> • Plan development: PIU • Plan implementation: PIU 	<ul style="list-style-type: none"> • Plan developed and approved 60 days prior to OHL commissioning

Table 1. Environmental and Social Management and Monitoring Requirements

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	minimize disruption to nesting/breeding fauna; <ul style="list-style-type: none"> • Provide advice to LACP in replacing trees and compensating for loss of income from trees. 			
Cultural Heritage				
28.	Appoint qualified/licensed archaeologist to conduct Archaeological Survey as part of process for obtaining relevant permits from Ministry of Culture, submit report to Ministry.	<ul style="list-style-type: none"> • Appointment made • Survey completed • Report submitted to Ministry and approved 	<ul style="list-style-type: none"> • PIU 	<ul style="list-style-type: none"> • Report approved prior to construction
29.	Obtain relevant permits from the National Archeological Agency of the Ministry of Culture.	Permit(s) received	<ul style="list-style-type: none"> • MOLDELECTRICA / PIU 	<ul style="list-style-type: none"> • One month prior to construction start
30.	Develop and implement Chance Find Procedure , to include: <ul style="list-style-type: none"> • Consultations with authorities; • Training for foremen in areas of most concern and most probable finds; • Training for workers in actions to take in case of finds • Procedures & rules for stopping work, securing discovery, notifying authorities, permitting removals, re-starting work, etc. 	<ul style="list-style-type: none"> • Expert appointed to prepare Procedure • Procedure developed • Procedure approved by Lenders and authorities • Training conducted • No damage to artefacts 	<ul style="list-style-type: none"> • Procedure development: PIU or Contractor • Procedure implementation: Contractor 	<ul style="list-style-type: none"> • Procedure approved by authorities: 30 days prior to construction • Implementation: throughout construction
Information Disclosure and Stakeholder Engagement				
31.	Implement Stakeholder Engagement Plan , review and revise as needed to ensure effective communications	<ul style="list-style-type: none"> • Stakeholder engagement per 	<ul style="list-style-type: none"> • PIU, with support from Contractor and 	<ul style="list-style-type: none"> • Implement: throughout construction and operation

Table 1. Environmental and Social Management and Monitoring Requirements

<i>Action no.</i>	<i>Action</i>	<i>Monitoring/ Performance indicators</i>	<i>Entity responsible</i>	<i>Timetable</i>
	with stakeholders	SEP	Consulting engineer	<ul style="list-style-type: none">Review & update: as needed, and prior to operation
32.	Implement Grievance Mechanism	<ul style="list-style-type: none">Register maintainedGrievances resolved	<ul style="list-style-type: none">PIU	<ul style="list-style-type: none">Throughout construction and operation