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WB4bis-REG-ENE-01:

**Feasibility Study and ESIA for
Elbasan (AL) - Bitola (MK)
400 kV Transmission Line**

**MK Environmental and Social Action Plan
(ESAP):
Section from Bitola (MK) to MK/AL Border**

30.11.2012



This project is funded by
the European Union

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*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

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LIST OF ABBREVIATIONS

AL	Albania
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EMF	electric and magnetic fields
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
EHS	Environmental, Health and Safety
ESMS	Environmental and Social Management System
HR	Human Resource(s)
IBA	Important Bird Area
IPA	Important Plant Area
LACP	Land Acquisition and Compensation Plan
MEPSO	Transmission System Operator of the Republic of Macedonia
MK	Macedonia
OHL	Over-head (Transmission) Line(s)
OHS	Occupational Health and Safety (Plan)
PBA	Priority Butterfly Area
PPE	personal protection equipment
PR	Performance Requirement(s) (of the EBRD Policy 2008 document)
SEP	Stakeholder Engagement Plan

1 Synopsis

Project Title:	Feasibility Study and ESIA for Elbasan (AL) - Bitola (MK) 400 kV Transmission Line
Project Number:	WB4bis-REG-ENE-01
Contractor:	COWI-IPF Consortium
Beneficiaries:	OST (AL) and MEPSO (MK)
Lenders:	EBRD, KfW
Location:	Tirana and Skopje
Project start date:	26/01/2012
Project Duration:	12 months
Anticipated completion:	January 2013

2 Environmental and Social Action Plan

The European Bank for Reconstruction and Development (EBRD) is considering providing financing to Macedonian Transmission System Operator (MEPSO) for the design, construction, and operation of a 400 kV overhead transmission line from Bitola to Macedonian / Albanian border¹⁾ and associated substations in Bitola and Ohrid. The project includes the following elements:

- The construction and operation of a new 400/110 kV substation in Ohrid area.
- The diversion of the existing 110 kV overhead line Bitola-Resen-Ohrid-Struga into Ohrid substation
- The construction of a new 400 kV overhead transmission line from Bitola to Macedonian / Albanian border

MEPSO has prepared and disclosed an Environmental and Social Impact Assessment (ESIA). This EIA described the project and the natural and social resources that could be affected, and evaluated the potential impacts the project could have on those resources. The ESIA also describes a series of actions that will need to be taken to prevent, control, or otherwise mitigate potential impacts. Those requirements are described in this Environmental and Social Action Plan (ESAP), which will be part of the financing agreement between EBRD and MEPSO. The performance of the required actions will be reported to EBRD by MEPSO and will be audited or otherwise evaluated by EBRD during construction²⁾ and operation of the project.

The table below constitutes the ESAP. It identifies the actions required, the basis of the requirement, the responsible entity, the timing of the action, and the criteria to be used for determining whether the goal of the action has been successfully achieved. Implementation of all the actions is the ultimate responsibility of MEPSO. When other companies perform work under contract, MEPSO will be responsible for their compliance with the requirements of the ESAP, even if direct oversight is by a contractor. This is expected to be accomplished by inclusion of requirements in contracts and subcontracts, and by direct oversight and supervision by MEPSO and/or its oversight contractor.

As agreed by EBRD and MEPSO, this ESAP may be revised from time to time during project performance. No changes will allow violations of Macedonian law or of EBRD requirements for environmental and social performance.

¹⁾ This transmission line is interconnection between Macedonia and Albania. From Macedonian / Albanian border it continues to Elbasan (Albania).

²⁾ For purposes of this ESAP, "construction" includes all actions in the field to prepare and construct the various components of the proposed project, including the overhead transmission line, access roads and substations. "Operation" means operation and maintenance of all facilities for the ultimate purpose of conveying electricity. "Project performance" includes the entire period of construction, operation, and decommissioning.

Environmental and Social Action Plan 400 kV Transmission Line Bitola – Macedonian / Albanian border, Macedonia				
No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
0	Submit report to the EBRD on environmental, social, health and safety performance, including status of each ESAP element and other agreed activities.	EBRD	- Each six months during construction - Annually during operation	Submission of reports to EBRD on schedule and in a mutually agreed format, with agreed supporting documentation
1	Environmental and social management			
1.1	Implement Macedonian administrative EIA procedure as required by Macedonian legislation and authorities.	Macedonian legislation on environment : Law on the Environment and associated relevant sub-laws	- Prior to construction	Approval by Macedonian authorities
1.2	Develop and implement an Environmental and Social Management System (ESMS), equivalent to those under ISO 9000, ISO 14001. (Note: certification is not required, only equivalence)	EBRD PR 1 / Best practice	- Develop systems prior to operation - Implement systems during operation	- Systems are developed, staff trained and systems are implemented. - Status reported in each report to EBRD
1.3	Establish and implement corporate policy and procedures for oversight of contractor environmental, health and safety (EHS) performance during construction, to include (at a minimum): - Inclusion of appropriate ESAP and other legal requirements in contracts, including requirement for staff/management training. - Assignment of clear responsibilities within MEPSO and oversight contractor for contractor oversight - Periodic inspections of contractors' construction camps and operations for ESAP compliance. - Contractor reports on performance sufficient to allow inclu-	EBRD PR 1 & 2 / Best practice	- Upon entry into contracts/ subcontracts - Prior to contractor activities	Include in EHS reports to EBRD: - Contractor oversight program description and adoption status - Highlights of performance (appointments, inspections, etc.)

³⁾ Unless otherwise noted or agreed, "report to EBRD" refers to inclusion of required information in the EHS reports required under item 0 of this ESAP.

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
	sion of data in ESHS reports to the EBRD and to allow MEPSO to determine if corrective actions are needed. - Verification of training and professional credentials for contractor ESHS managers and staff. - Requirement for contractor worker grievance mechanism the same as or equivalent to what is required under item 2.4 for MEPSO employees.			
1.4	Acquire and comply with all required permits and authorizations.	Macedonian law / EBRD PR 1	Prior to beginning any activities that require permits or authorizations	- Permits & authorizations received - Reports submitted to authorities as required - Compliance status reported to EBRD
1.5	Appoint an independent EHS consultancy to undertake periodic external monitoring of key EHS issues as outlined in this ESAP. (Note: could include assistance in reporting under item 0)	EBRD PR 1 / Best practice	- Appoint: prior to first disbursement - Monitor: annually throughout construction and each two years thereafter until mutually agreed that monitoring no longer needed	Monitoring reports submitted to EBRD with EHS reports
2	Labour and working conditions			
2.1	Develop and implement an Occupational Health and Safety (OHS) Plan to guide all activities on project sites during site preparation, construction and operation. Also require contractors to develop plans or comply with MEPSO plan. Plan requirements to include (but not be limited to): - Job- and task-specific hazard analysis and controls for all activities - Provision of personal protection equipment (PPE)	Compliance with relevant Macedonian legislation / EBRD PR 2 / Best Practice	- Develop respective plans prior to construction and prior to operation - Implement the respective plans during construction and operation	- Submission and approval of MEPSO plan by independent OHS professional and/or EBRD prior to construction - Submission of contractor OHS plan(s) and approval by MEPSO - Report to EBRD on OHS issues, including incident and

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
	<ul style="list-style-type: none"> requirements for use of PPE, and enforcement of PPE use - Safety training for all personnel in their language, covering hazards and safety protocols of their jobs - Review and approval of contractors' OHS plans, which must meet same standards as MEPSO plan - Oversight of contractor OHS implementation, including mandatory reporting - Recording incident statistics, including total work hours, lost time incidents, major injuries, fatalities, etc. 			<ul style="list-style-type: none"> enforcement statistics, status of training, etc. Report to cover MEPSO and contractor workforces - Report to EBRD immediately in case of major accidents and/or fatalities
2.2	Appoint and maintain a supervisory person to be responsible for overseeing OHS for the entire project, to report directly to the project manager, and subsequently to MEPSO management.	EBRD PR 2 / Best practice	Appointed prior to construction and prior to operation, maintained at all times during construction and operation.	<ul style="list-style-type: none"> - Appointment of qualified OHS manager - Qualifications submitted with first report under item 0 - Provide training for OHS leaders - Responsible persons maintained at all times
2.3	Support local labor force and economy by: <ul style="list-style-type: none"> - Providing realistic information on employment opportunities, with transparent hiring practices - Employing local workers where possible: establish goals for local hires, consider training for permanent positions - Paying wages at least average for the area for comparable positions - Providing opportunities for local firms to subcontract supplies and services where possible. 	Macedonian law / EBRD PR 2 / Best Practice	Prior to workforce selection and prior to establishment of work camps	<ul style="list-style-type: none"> - Local announcements when hiring - Training for local workers - Wages comparable to regional averages
2.4	Develop and implement a formal grievance mechanism for employees and contractors. (Note: this is separate from the stakeholder grievance mechanism required under EBRD PR 10)	EBRD PR 2 / Best Practice	Develop and implement prior to construction and during construction and operation	Reports to EBRD on the operation of grievance mechanism (grievances and resolutions)

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
2.5	Develop/update Human Resource (HR) Policy and Procedures Manual as needed to fully comply with national law and EBRD requirements.	Macedonian law / EBRD PR 2 / Best Practice	Prior to construction	<ul style="list-style-type: none"> - Submission of HR Policy and Procedures to the EBRD - Include in report to EBRD data on workers, including dismissals and new hires, status of medical checks, etc. - Include in reports to EBRD the numbers of workers in various categories
2.6	Ensure and maintain conditions (sanitation, privacy, food, etc.) in work camps to meet Macedonian law and international best practice.	Macedonian law / EBRD PR 2 / Best Practice	Prior to use of work camp	<ul style="list-style-type: none"> - Consultation with local authorities regarding work camp(s) - Work camp(s) conditions compliant with EBRD PR 2 and international best practice - Report to EBRD on work camps
3	Pollution prevention and abatement			
3.1	Implement air quality management and construction practice to prevent dust and particulate emissions by effective control of the potential sources, including (at a minimum): <ul style="list-style-type: none"> - Applying water sprinkling measures - Regular inspection of the local roads - Proper maintenance of all construction machinery and equipment - Appropriate restriction of vehicle speeds on unpaved roads - Cover loads as needed to prevent dust release. 	Macedonian law / EBRD PR 3 / Best practice	<ul style="list-style-type: none"> - Develop prior to construction - Implement during construction 	Report to EBRD on monitoring results and highlights of dust control / suppression activities
3.2	Good construction practice to prevent water pollution, including (at a minimum): <ul style="list-style-type: none"> - Avoid water protected / management zones - Strict control measures to avoid adverse impacts on ground 	Macedonian law / EBRD PR 3 / Best practice	Implement during construction	<ul style="list-style-type: none"> - No unauthorized construction works on water protection zones - No unauthorized discharges to waters

Environmental and Social Action Plan 400 kV Transmission Line Bitola – Macedonian / Albanian border, Macedonia				
No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
	<ul style="list-style-type: none"> waters - No water discharge directly to watercourses - Strict erosion control measures to prevent run-off to water - Provision of spill and leak cleanup materials / equipment - Regular maintenance of all machinery to prevent engine oil and fuel leaks - Provision of portable toilets to prevent any sewage being discharged on site - No crossing of watercourses by vehicles and machinery - Minimize works near rivers in wet weather - Site restoration/re-vegetation soon after construction completed - No towers within 10 meters of water bodies. 			<ul style="list-style-type: none"> - No disruption of aquatic habitats - Report to EBRD any accidental discharges
3.3	<ul style="list-style-type: none"> - Develop and implement site-specific measures to mitigate geological hazards from construction activities. - Good construction practice to prevent on-site geological hazards from construction activities. 	<ul style="list-style-type: none"> - Compliance with relevant Albanian legislation; - KFW Environmental and Requirements; - Best International Practice. 	<ul style="list-style-type: none"> - Develop prior to construction - Implement during pre-construction and construction phases 	<ul style="list-style-type: none"> Geological hazards avoided / mitigated and adverse effects avoided/mitigated
3.4	Develop and implement site specific erosion control measures for all areas where the ground will be disturbed during construction in accordance to good international practices.	EBRD PR 3 / Best practice	<ul style="list-style-type: none"> - Develop prior to construction - Implement during construction 	<ul style="list-style-type: none"> - Minimize erosion and soil disturbance - Report to EBRD on highlights of erosion control measures
3.5	Develop a waste management plan to guide management of all waste types to be generated during construction and operation. Ensure all off-site management is by licensed companies and in licensed places.	Macedonian law / EBRD PR 3	<ul style="list-style-type: none"> - Develop prior start of construction - Implement during construction and operation 	<ul style="list-style-type: none"> - Plan reviewed and/or approved by competent authorities, if required - Report to EBRD on status of plan development and approval - Reports to authorities, if required

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
				<ul style="list-style-type: none"> - Reports to MEPSO by all contractors on amounts, types, and management of all solid wastes - Consolidated reports to EBRD on amounts, types and management of all solid wastes
4	Community health, safety, and security			
4.1	Ensure compliance to international standards on public exposure (see relevant section of the ESIA) to electric and magnetic fields, including: <ul style="list-style-type: none"> - appropriate selection of tower sites away from houses / properties - compliance with technical specifications for minimum height of the OHL conductors - measurements of electric and magnetic fields as required and/or requested. 	Macedonian law / EBRD PR 4 / Best Practice	<ul style="list-style-type: none"> - During design and construction - Measurements during pre-construction stage, post-construction stage and periodical measurements 	<ul style="list-style-type: none"> - Public exposure to the EMF in compliance to international standards - Report to EBRD on measurement results
4.2	Develop and implement procedures to protect public health and safety, to include (but not be limited to): <ul style="list-style-type: none"> - Security as needed to prevent unauthorized access to project locations. - Notice to local authorities and nearby residents before major activities and traffic. - Hazard notices/signs/barriers to prevent access to energized components. 	EBRD PR 4 / Best practice	<ul style="list-style-type: none"> - Develop prior to construction - Implement during the construction 	Safety conditions achieved
4.3	Establish and enforce rules for worker behavior when dealing with local residents and visitors in order to prevent disturbances and adverse impacts.	EBRD PR 4 / Best practice	During the construction	<ul style="list-style-type: none"> - No serious incidents between workers and local population - Report to EBRD on all incidents
4.4	Traffic management plan, including:	EBRD PR 4 /	- Develop prior to	- Traffic management plan agreed

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
	<ul style="list-style-type: none"> - Transport management planning—route planning - Training for drivers and equipment operators, enforcement of rules - Speed limits - Vehicle management and maintenance - Community liaison and safety 	Best practice	construction - Implement during the construction	with local and traffic authorities - Submission of plans to EBRD with first report - Plan implemented
4.5	Good construction practice to prevent off-site nuisance from construction noise.	Macedonian law / EBRD PR 4 / Best practice	Implement during construction	Noise level reduced and adverse effects avoided
4.6	Implement measures to mitigate nuisance from operational noise: <ul style="list-style-type: none"> - Appropriate corona testing - Engineering measures to suppress operational noise at substations - Response to complaints 	Macedonian law / EBRD PR 4 / Best practice	<ul style="list-style-type: none"> - Develop during design stage and prior to construction - Measurements during operation, if requested 	Noise level reduced and adverse effects avoided
5	Land acquisition, involuntary resettlement and economic displacement			
5.1	In consultation with affected persons, develop and then implement a detailed Land Acquisition and Compensation Plan (LACP), in line with EBRD requirements and Macedonian law. Wherever possible, avoid expropriation.	Macedonian law / EBRD PR 5	<ul style="list-style-type: none"> - Finalize plan: before any land acquisition or compensation takes place - Implement plan: after approval of the Plan by EBRD 	<ul style="list-style-type: none"> - LACP reviewed and approved by EBRD - All land acquisition or compensation in accordance with LACP - Report to EBRD status of LACP implementation, including all economic losses due to project and any compensation paid
5.2	Designate person(s) / department to take responsibility for land acquisitions and to manage the process in accordance with Macedonian law and EBRD's policy requirements.	EBRD PR 5	During the development / implementation of the LACP	<ul style="list-style-type: none"> - Designation of person(s) / department designated - Identify person/department in report to EBRD

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
5.3	Designate person(s) to act as the point of contact for the community members affected by land acquisition.	EBRD PR 5	During the development / implementation of the LACP	<ul style="list-style-type: none"> - Designation of contact person - Provision of contact details to affected people - Identify person and activities in report to EBRD
6	Biodiversity conservation and sustainable management of living natural resources			
6.1	Undertake pre-construction bio-surveys: <ul style="list-style-type: none"> - Bio-survey by qualified experts prior to micro-sitting tower and other locations, with the intent being to identify areas that must be avoided in order to prevent disturbances or significant fragmentation of sensitive habitats, including PBA Struga, and protected species. - A bird survey by qualified ornithologists at an appropriate time of year and using relevant methods to allow sound micro-sitting of towers and access tracks and to identify eventual need of bird diverters on selected OHL sections, in particular Pelagonija (IBA Pelagonija) and Struga Field. 	Macedonian law / EBRD PR 6	Prior to construction	<ul style="list-style-type: none"> - Nature resources protected. - Report to Macedonian authorities and EBRD on bio-surveys' findings.
6.2	Good construction practice, including (at minimum): <ul style="list-style-type: none"> - Use, as much as possible, existing access roads and minimizing construction of new roads - No construction camps or lay-down areas within sensitive ecological areas - Establish and enforce rules for workers to prohibit fires, collecting plants or eggs, disturbance and hunting of game, birds, etc - Do not store any waste material (concrete, steelworks, soil, etc.) in sensitive areas. - Re-vegetation of all disturbed land as soon as possible after construction. 	Macedonian law / EBRD PR 6	Prior to and during construction	<ul style="list-style-type: none"> - Nature resources protected - Report to EBRD on actions taken to control worker behavior, including incidents

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No.	Action	Source of requirement	Timetable / Project Phase	Target and Evaluation Criteria For Successful Implementation ³⁾
6.3	Consult with relevant authorities to develop compensation plans for loss of forests.	Macedonian law / EBRD PR 6	Prior to the construction	<ul style="list-style-type: none"> - Compensation plans approved by authorities - Include in reports information on compensation measures
6.4	As agreed with authorities, mark the OHL sections assessed during pre-construction survey to be associated with a potential risk of bird collision with suitable bird diverters.	EBRD PR 6 / Best practice	Install during construction, monitor during operation	<ul style="list-style-type: none"> - Report immediately any excess or unusually high mortality
6.5	Develop and implement a monitoring programme to assess bird mortality and the need for measures to reduce mortality. Monitoring to be most intense during migration and breeding/fledging seasons. Provide results to authorities and in case of excess mortality, develop and implement bird protection plan.	EBRD PR 6 Best practice	<ul style="list-style-type: none"> - Develop: prior to completion of construction - Implement: throughout operation until authorities allow cessation 	<ul style="list-style-type: none"> - Development of programme - Implementation of programme - Review of results by authorities - Further bird protection measures as needed - Report to EBRD
8	Cultural heritage			
8.1	Develop and implement a chance find procedure and ensure all contractors and other relevant parties are trained in its use.	Macedonian law / EBRD PR 8	<ul style="list-style-type: none"> - Develop prior to construction - Implement during the construction 	<ul style="list-style-type: none"> - Report to authorities in case of finds
10	Information disclosure and stakeholder engagement			
10.1	Implement Stakeholder Engagement Plan (SEP), including stakeholder grievance mechanism	EBRD PR 10 / Best practice	During construction and implementation	<ul style="list-style-type: none"> - Report to EBRD on stakeholder engagement and on all grievances and resolutions