



SE MOLDELECTRICA



MINISTRY OF ENERGY



THE WORLD BANK



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT (P160829)

THE DETAILED DESIGN STAGE

FINAL REPORT

ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT & ESMP SPECIFIC FOR UPGRADING THE 330/110/35 kV CHISINAU SUBSTATION

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MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 2/207

Contents

CHAPTER 1: INTRODUCTION	10
1.1 Description of the Overall project	10
1.1.1 The Project Context	10
1.1.2 Project Development Objective	10
1.1.3 Project Beneficiaries	11
1.1.4 Project Parts	11
1.2 The Upgrade of the 330 kV Chisinau Substation	12
1.2.1 Extension of the existing 330 kV Chisinau Substation	12
1.3 Purpose of the site-specific ESIA	15
1.4 Approach and methodology of the ES impact assessment	15
1.4.1 General procedure	15
1.4.2 Environmental and Social Impact Assessment Approach specific for DD stage	16
1.4.2.1 General	16
1.4.2.2 Screening criteria for risks assessment	17
1.4.2.2.1 The World Bank ES requirements	17
1.4.2.2.2 The applicable Republic of Moldova ES requirements	18
1.4.2.2.2.1 The applicable requirements for technical design	18
1.4.2.2.2 Risk assessment traceability from Feasibility and Pre-design stages	19
1.4.2.2.3 Site visits	20
1.4.2.2.4 The Project Area of Influence	20
1.4.2.3 Identification of potential impacts and mitigation measures	21
1.5 Organization of the ES impact assessment report	23
CHAPTER 2: POLICY AND REGULATORY FRAMEWORKS	24
2.2 Environmental and Social Policy and Normative Acts	24
2.3 Environmental assessment vetting process	27
2.4 Other important social and environment regulations	27
2.5 International Treaties related to environment and social standards	31
2.6 World Bank Operational Policies	33
2.7 Provision of the Regulation regarding the protection of electrical network	37
CHAPTER 3: THE DESCRIPTION OF THE 330/110/35KV CHISINAU SUBSTATION	40
3.1 General data about the Chisinau Substation	40
3.1.2 Access road to the Chisinau SS	43
3.1.3 Administrative infrastructure	44
3.1.4 Potable water infrastructure	44
3.1.5 Sewage system	44
3.1.6 Waste management	44
3.1.7 Workforce at the Chisinau Substation	45
3.1.8 Means of transport	45
3.1.9 Security	45
3.1.10 Firefighting Equipment	45
3.1.11 First Aide facility	46
3.2 Description of the Chisinau Substation's Equipment	46
3.2.1 General data of the Chisinau Substation	46
3.2.2 Substation Equipment	46
3.3 Contractors Facilities	46
3.3.1 Construction Activities	46
3.3.2 Operation	47
3.3.2.1 Operation by Contractor	47



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 3/207

3.3.2.2 Operation by the Beneficiary SE Moldelectrica	48
3.3.3 Decommissioning	48
3.3.3.1 Decommissioning by Contractor	48
3.3.3.1 Decommissioning by the Beneficiary SE Moldelectrica	48
3.4 Analysis of Alternatives for Chisinau Substation	48
3.6 Implementation Schedule	48
CHAPTER 4: SOCIO-ECONOMIC BASELINE	49
4.1 Administrative Setup	49
4.2 Population and Demography	50
4.3 Occupation, Income and Expenditure	50
4.4 Access to Infrastructure faculties	51
4.5 Gender and Social Divisions (Status of Women and their role in local development)	52
4.6 Poverty profile including disadvantaged and vulnerable people	53
4.7 Land ownership, livelihoods of people	54
CHAPTER 5: ENVIRONMENTAL BASELINE	56
5.1 Physical Environment	56
5.1.1 Project Influence Area	56
5.1.2 Physiography and Land Use	56
5.1.3 Climate	57
5.1.4 Hydrology	59
5.1.5 Geology	60
5.1.6 Seismicity	62
5.2 Chemical Environment	63
5.2.1 Air Quality and Climate Change	63
5.2.2 Noise and Vibration Levels	65
5.2.3 Groundwater Quality	66
5.3 Biological Environment	66
5.3.1 General Ecosystem	66
5.3.2 Flora and forest resources	66
5.3.3 Fauna	67
5.3.3.1 General	67
5.3.3.1 Local and migratory birds	67
5.3.4 Protected Areas	67
5.3.5 Cultural Heritage	68
CHAPTER 6: IMPACT ASSESSMENT	69
6.1 General	69
6.2 Sensitivity of Impacts during design, construction, operational and decommissioning phases	69
6.2.1 Valued Environmental and Social Components	70
6.2.2 Special regime of protection	70
6.2.3 Sources of Impacts	70
6.2.4 Intensity and Direction of Impact	72
6.2.5 Summary Assessment of Receptor Sensitivity	74
6.3 Magnitude of Impacts	75
6.3.1 Magnitude of Impacts during Detailed Design Phase	75
6.3.2 Magnitude of Impacts during Construction Phase	76
6.3.2 Magnitude of impacts during the operational phase	78
6.3.3 Summary of Key Project Activities and Impact Magnitude	79
6.4 Impact Significance	80
6.5 Potentially positive impacts	81



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 4/207

6.5.1 Construction Phase	81
6.5.2 Operational and decommissioning Phases	81
6.5.2.2 Community Health and Safety	82
6.5.2.3 Opportunities for Gender balanced policy promotion	82
6.6 Potentially negative impacts	82
6.6.1 Construction Phase	82
6.6.1.1 Physical impact	82
6.6.1.2 Biological Impacts	83
6.6.2 Operational and Decommissioning Phases	85
6.6.2.3 Biological Impact	86
6.6.2.4 Social Impact	86
CHAPTER 7: MITIGATION MEASURES	87
7.1 General Approach	87
7.2 Mitigation Measures for Construction Phase	87
7.2.1 General	87
7.2.2 Mitigation of Environmental and Social impacts	87
7.2.2.1 Soil and subsoil protection	87
7.2.2.2 Hydrology/water resources protection	89
7.2.2.3 Air protection	89
7.2.2.4 Climate change	90
7.2.2.5 Noise and vibration	91
7.2.2.6 Cultural Heritage	91
7.2.2.7 Community health and safety	91
7.2.2.8 Handling and Storage of Hazardous Materials and Wastes	92
7.2.2.9 Construction Wastes	92
7.2.2.10 Social and Gender	93
7.2.2.11 Trafficking in Persons (TIP)	93
7.2.2.12 HIV/AIDS and STD	94
7.2.2.13 The Code of Conduct	95
7.2.2.14 Occupational health and safety	95
7.3 Operational Phase	95
7.3.1 General	95
7.3.2 Mitigation of Environmental and Social Impacts	96
7.3.2.1 Air protection	96
7.3.2.2 Climate change	96
7.3.2.3 Noise and vibration	96
7.3.2.4 Vegetation management	97
7.3.2.5 Electrocution collision	97
7.3.2.6 Electric and magnetic fields	97
7.4 Decommissioning Phase	98
7.4.1 General	98
7.4.2 Mitigation of Environmental and Social Impacts	98
CHAPTER 8: OCCUPATIONAL HEALTH AND SAFETY	104
8.1 General minimum OHS requirements specific for Chisinau Substation	104
8.2 Stability and solidity	105
8.3 Energy distribution installations	105
8.4 Emergency routes and exits	106
8.5 Fire detection and fire fighting	106
8.6 Ventilation	106
8.7 Exposure to particular risks	107



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 5/207

8.8 Temperature	107
8.9 Natural and artificial lighting of workstations, rooms and traffic routes on the site	107
8.10 Doors and gates	107
8.11 Traffic routes — danger areas	108
8.12 Loading bays and ramps	108
8.13 Freedom of movement at the workstation	108
8.14 First aid	109
8.15 Sanitary equipment	109
8.16 Pregnant women and nursing mothers	110
8.17 Handicapped workers	111
8.18 Other miscellaneous requirements	111
8.19 Specific OHS requirements during the earthworks	111
8.20 OHS requirements during installation works	112
8.21 OHS requirements during welding works	114
8.22 OHS requirements during concrete works	115
8.23 OHS requirements during masonry works	118
8.24 OHS requirements during the execution of roofs and covers works	119
8.25 OHS requirements for lifting equipment	121
8.26 OHS requirements for scaffolding and leaders	121
8.27 OHS requirements for atmospheric influences	122
8.28 OHS requirements for falling objects	122
8.29 OHS requirements for falling from a height	122
8.30 OHS requirements for health surveillance	122
8.31 OHS requirements for safety equipment	123
8.32 OHS requirements for personal protective equipment at the workplace	123
8.33 OHS requirements for manual handling of loads	123
8.34 OHS requirements for hearing protection	123
8.35 OHS requirements for signs at work	124
8.36 OHS requirements related to exposure to asbestos (if any)	125
8.37 General OHS requirements for the workplace	125
8.38 Requirements for the Code of Conduct (CoC)	126
8.39 Requirements regarding behaviors constituting sexual exploitation and abuse (SEA)	127
8.40 Requirements regarding behaviors constituting sexual harassment (SH)	127
8.41 Requirements for Work Involving Electrical Hazards	129
8.41.1 General	129
8.41.2 Energized Electrical Work Permit	129
8.41.3 Shock Risk Assessment	130
8.41.4 Shock Protection Boundaries	130
8.41.5 Equipment Labeling	131
8.41.6 Personal and Other Protective Equipment	132
8.41.7 Alerting Techniques	133
CHAPTER 9. CAPACITY BUILDING	135
9.1 General	135
9.2 Capacity building for construction phase	135
9.3 Capacity building for operational phase	137
CHAPTER 10: PERFORMANCE EVALUATION	139
10.1 Monitoring, measurement, analysis and performance evaluation	139
10.1.1 General	139
10.1.2 Monitoring and measurement during Construction Phase	139
10.1.3 Monitoring and measurement during Operation Phase	140



MEPIU


POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 6/207

10.1.4 Monitoring the compliance with ES requirements	145
10.1.4.1 Compliance with requirements of WB	145
10.1.5 Compliance with applicable RM requirements	145
10.1.5.1 Construction Permit issuance	145
10.2 Internal audit	146
10.3 Management Review	146
CHAPTER 11: EVALUATION OF COMPLIANCE WITH REQUIREMENTS OF ESMP	147
11.1 General	147
11.2 Incidents	147
11.2.1 Incidents occurring during construction phase	147
11.2.1 Incidents occurring during operational phase	148
11.3 Nonconformity and corrective action	148
11.3.1 Identified non-conformity during construction phase	148
11.3.2 Identified non-conformity during operational phase	148
CHAPTER 12. INSTITUTIONAL ARRANGEMENTS	150
12.1 Institutional responsibilities	150
12.2 Project Management Unit	150
12.3 Project Implementation Unit	150
12.4 The Beneficiary SE Moldelectrica	151
12.5 Construction Supervision Engineer	151
12.6 General Contractor	152
12.7 Monitoring Supervising Agencies	152
12.7.1 Roles and responsibilities of the State Supervision Agencies for design phase	152
12.7.2 Roles and responsibilities of the State Supervision Agencies for operational phase	153
CHAPTER 13: STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATIONS	154
13.1 Public Consultations and Disclosure	154
13.1.1 Public Consultation Meetings	154
13.1.2 Consultations Feedback/Grievance Redress Mechanism	157
13.1.3 Framework for Future Public Consultations	158
13.1.4 Access to Information and GRM	159
13.2 Installation of the Site Informational Panel	159
13.3 Consultation and Participation	160
13.3.1 Consultation and participation of workers	160
13.3.1 Consultation and participation of the community	160
14 ANNEXES	161
Annex 14.1: The Incident Report form	162
Annex 14.2: The Nonconformity and Corrective Actions Report form	163
Annex 14.3: The feedback form for public consultation process	165
Annex 14.4: Public Consultation Report template	166
Annex 14.5: The Human Resource Procedure template	167
Annex 14.6: Public Consultation Report for Site specific ESIA&ESMP&RAP for Chisinau SS.	168

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 7/207
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ABBREVIATIONS

CSE	Construction Supervision Engineer
DD	Detailed Design
EC	European Commission
EPI	Environmental Protection Inspectorate
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EU	European Union
FS	Feasibility Study
GD	Government decision
GRM	Grievance Redress Mechanism
H&S	Health and Safety
ILO	International Labour Organization
ISO	International Standard Organization
LPA	Local Public Authority
MEPIU	Moldova energy project implementation unit
MoIRD	Ministry of Infrastructure and Regional Development
MoEn	Ministry of Environment
NAA	National Archaeological Agency
NAPH	National Agency for Public Health
OHS	Occupational Health and Safety
O&M	Operation & Maintenance
PAP	Project Affected People
PAI	Project Area of Influence
PD	Preliminary Design
PPE	Personal Protective Equipment
RAP	Resettlement Action Plan
RM	Republic of Moldova
SEP	Stakeholder Engagement Plan
SF ₆	Sulfur hexafluoride
TMP	Traffic Management Plan
ToR	Terms of Reference
WB	World Bank
WBS	World Bank Standards



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 8/207

Executive Summary

As per ToRs Environmental consulting services for development of the Site-Specific ESIA/ESMP for upgrading of the 330/110/35 kV Chisinau Substation (Plant Design, Supply & Installation) at the detailed design stage and the requirements of the Environmental Permit no. 1/4745 of December 31, 2019 issued by the Environmental Agency and the World Bank's Environmental and Social Standards, a site specific environmental and social impact assessment shall be developed, revised by the World Bank and approved by MEPIU.

The site specific environmental and social impact assessment identifies environmental and social aspects and hazards, assesses risks and establishes environmental and social requirements for controlling risks under control based on data provided from the detailed design process.

The present document provides a project description and context, applicable law and requirements specific for design, institutional responsibilities, specific environmental and social baseline for upgrading the Chisinau Substation, the significant environmental/social impacts identified, which will most likely or positively occur during construction and operational phases, describes mitigation, monitoring and institutional measures to be taken during project implementation to eliminate adverse impacts, offset them, or reduce them to acceptable levels. The characteristic of the proposed upgrading the 330/110/35 kV Chisinau SS located on existing Chisinau SS in the Bacioi commune are the following:

For the new bay, the following primary equipment is provided, sized for 2000 A, 40 kA/1s:

- connection circuit to bus bar I - circuit I-VI:
 - circuit breakers using Sulphur hexafluoride (SF₆) as extinguishing medium, driven by 3 operating mechanisms and equipped with two tripping circuits; circuit breakers shall be purchased together with steel supports;
 - two-columns disconnectors, main blades horizontal opening, fitted with 1 or 2 earthing switches, equipped with modern electric driving devices, which will allow remote control;
 - oil insulated current transformers complying with the requirements for control metering and relay protection equipment pertaining to the substation; New current transformers will be equipped at each three-pole set with a connection box;
- connection circuit to bus bar II - circuit II-VI for connection to the AT:
 - circuit breakers using Sulphur hexafluoride (SF₆) as extinguishing medium, driven by 3 operating mechanism and equipped with two tripping circuits; circuit breakers shall be purchased together with steel supports;
 - two-columns disconnectors, main blades horizontal opening, fitted with 1 or 2 earthing switches, equipped with modern electric driving devices, which will allow remote control;
 - oil insulated current and voltage transformers complying with the requirements for control metering and relay protection equipment; New current and voltage transformers will be



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 9/207


equipped at each three-pole set with a connection box and respectively connection and protection box;

- zinc oxide type arresters provided with discharge meters.

Mitigation measures presented in the ESMP are produced to guide the General Contractor (GC) to prepare its own Environmental and Social Management Plan (CESMP) to be integrated in the Detailed Plan of Works on Site, to calculate the costs of the environmental protection and social impact mitigation measures that General Contractor will undertake during the construction phase of the project.

Additionally, the present document establishes environmental and social requirements (ESMP) for the Beneficiary S.E. Moldelectrica specific for operational phase in order to emphasize economic growth, inclusion and sustainability by including a strong concern for equity being a TSO member to support the synchronous connection of the Ukrainian and Moldovan Power Systems to ENTSO-E Continental Europe Power System. Existing equipment (330/110/35 kV) from the Chisinau Substation and the new installed equipment (400 kV) shall be maintained properly by competent and trained personnel and the Company shall establish and implement an environmental and social management system in order to identify significant environmental aspects, assess risks and control risks by the Company. Within the Company's environmental and social management system, the Company shall establish, implement and maintain the processes needed to evaluate fulfilment of its compliance obligations regarding international best practice for import, use, recovery, recycling, reclamation and destruction of substances (SF₆) that deplete the ozone layer in conformity with Directive 2003/87/EC and Amendment to Annex B of the Kyoto Protocol to the United Nations Framework Convention on Climate Change which the Republic of Moldova ratified in 2008.

The proposed capacity building measures for the Beneficiary Moldelectrica shall be taken in order to overcome technical, organizational and legal possible obstacles within ENTSO-E Continental Europe Power System. The scope of the capacity building measures is to enhance awareness of the personnel regarding their contribution to the effectiveness of the Company's environmental and social management system, including the benefits of enhanced environmental and social performances.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 10/207
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CHAPTER 1: INTRODUCTION

1.1 Description of the Overall project

1.1.1 The Project Context

The World Bank Group has supported the development of the energy sector in Moldova through a combination of investments, policy lending, technical assistance, and guarantee operations, and is well placed to continue financing priority investments in the electricity transmission network based on the successful results of Energy I (P008555) and Energy II (P040558) Projects and assist in increasing the institutional capacity of the Moldovan transmission system operator.

The WB will support investments aimed at the construction of 400 kV Vulcanesti - Chisinau overhead transmission line, extension/upgrade of two existing substations, strengthening of power dispatch and metering system.


The construction of new transmission line and extension of the existing substations will enable a more reliable access to lower cost of electricity for consumers, improved productivity and competitiveness, creation of new jobs, and stronger economic growth. The Project is directly addressing the goal of creating physical electricity interconnections, thus increasing security of supply and creating potential opportunities for development of competitive markets and regional integration.

1.1.2 Project Development Objective

The objective of the project is to increase capacity and improve reliability of the power transmission system in Moldova. The typical projects activities for the upgrading the 330/110/35 kV Chisinau SS are presented in the table 1-1.

Table 1-1: The Project activity for the upgrading the 330/110/35 kV Chisinau SS

No.	Environmental & Social Components/Phases	Planned activities for the project's stages
1	PRE-CONSTRUCTION STAGE	
1.1	Topographical survey	Perform topo survey for developing Basic Design and DD
1.2	Geological survey	Tale soil sample to develop BD&DD
2	CONSTRUCTION	
2.1	Civil works	all necessary site preparatory and infrastructural works including excavation, levelling, grading, filling, compacting
2.2	Installation & other services	Soil arrangement, roads and platforms
2.3	Autotransformers works	400 kV and Civil Works and Installation of Equipment
2.4	Installation of protection equipment & SCMS	Equipment installation and SCMS
2.5	Testing and Commissioning	Construction of the power transmission line and substations

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 11/207
---	--	---------------------

No.	Environmental & Social Components/Phases	Planned activities for the project's stages
2.6	OHS	Ensure OHS on construction site
3	OPERATION	
3.1	Operation and maintenance of the new equipment in the Chisinau SS	Presence and operation of equipment, and inspection and maintenance of conductor, towers and structure in substations
3.2	Vegetation management	Vegetation clearance associated with the maintenance of the ROW
3.3	Wastes and hazardous materials management	Handling operations and storage of hazardous wastes and used during the operation, including oil used in transformers in substations
3.4	Transportation & circulation	Employee transportation and movement of vehicles in the ROW, including the fueling and maintenance of vehicles.
3.5	Purchase of materials/goods and services	Purchases required for the operation of the 400 kV OHTL
3.6	OHS	
4	DECOMMISSIONING	
4.1	Removal of installations	Works related to the dismantling of facilities and activities associated with final restoration (decontamination sites, re-naturalization, etc.)
4.2	Purchase of materials/goods and services	Purchases required for completion of the decommission work.
4.3	OHS	Insurance of OHS aspects on site

1.1.3 Project Beneficiaries

The project beneficiaries are:

- All electricity consumers in Moldova connected (directly or indirectly) to the power transmission system,
- ME and other sector stakeholders in Moldova. ME will benefit from improved operational efficiency and reduction of transmission losses due to better grid management systems and capacity strengthening. Financial benefits will also accrue from a reduction of operating costs due to improved infrastructure and potential ability to engage in regional power trade. ME will benefit from capacity strengthening and technical assistance to carry out their mandates to implement regional power trade.

1.1.4 Project Parts

Part 1. Construction of Vulcanesti - Chisinau OHTL, including the following:

- (a) Construction of approximately 158 km of 400kV Vulcanesti-Chisinau single circuit OHTL; and
- (b) Support through provision of consulting services for purposes of supervision of Parts 1 and 2 of the Project.

Part 2. Extension of two substations, including the (a) Upgrade of 330 kV Chisinau substation; and (b) Extension of 400 kV Vulcanesti substation.

Part 3. Strengthening of power dispatch and metering system, including the following:

- (a) Upgrade of ME's Supervisory Control and Data Acquisition System/Energy Management System (SCADA/EMS);



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 12/207

- (b) Upgrade of the ME's Meter Management System (MMS);
- (c) Construction of a new headquarters (HQ) building for ME, including a Central Dispatch Center (CDC); and
- (d) Development of technical specifications for SCADA/EMS and MMS.

Part 4. Technical Assistance and Project Management, including the following:

- (a) Support to MEPIU for Project Management activities and Operating Costs, including provision of consulting services;
- (b) Support to ME and MEPIU through the carrying out of Trainings;
- (c) Carrying out an environmental audit of polychlorinated biphenyl (PCB) at Vulcanesti SS site; and
- (d) Carrying out project audits.

1.2 The Upgrade of the 330 kV Chisinau Substation

1.2.1 Extension of the existing 330 kV Chisinau Substation

A new bay pertaining to a new AT 400/330 kV will be built in the existing 330 kV Chisinau substation consisting of one bay block AT/400kV OHTL.

The new bay will be built on the east side of 330 kV substation, near the existing OHL MGRES 2 bay, inside the substation. Similar to the 330 kV OHTL bays existing in the substation, it is proposed the new bay diagram to be provided with 2 circuit-breakers on the circuit, respectively circuit I-VI and circuit II-VI.

For the new bay, the following primary equipment is provided, sized for 2000 A, 40 kA/1s:

- connection circuit to bus bar I - circuit I-VI:
 - circuit breakers using Sulphur hexafluoride (SF₆) as extinguishing medium, driven by 3 operating mechanisms and equipped with two tripping circuits; circuit breakers shall be purchased together with steel supports;
 - two-columns disconnectors, main blades horizontal opening, fitted with 1 or 2 earthing switches, equipped with modern electric driving devices, which will allow remote control;
 - oil insulated current transformers complying with the requirements for control metering and relay protection equipment pertaining to the substation; New current transformers will be equipped at each three-pole set with a connection box;
- connection circuit to bus bar II - circuit II-VI for connection to the AT:
 - circuit breakers using Sulphur hexafluoride (SF₆) as extinguishing medium, driven by 3 operating mechanism and equipped with two tripping circuits; circuit breakers shall be purchased together with steel supports;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 13/207

- two-columns disconnectors, main blades horizontal opening, fitted with 1 or 2 earthing switches, equipped with modern electric driving devices, which will allow remote control;
- oil insulated current and voltage transformers complying with the requirements for control metering and relay protection equipment; New current and voltage transformers will be equipped at each three-pole set with a connection box and respectively connection and protection box;
- zinc oxide type arresters provided with discharge meters.

The 330 kV Chisinau substation is outdoor type, with 3 voltage levels. The 330 kV OHL bays occupy two near-by fields for the connection, through circuit breakers, at each of the two busbars.

The width of the bays is of 24 m. Busbars and bays circuits are made of flexible conductors. Autotransformers are located between 330 kV and 110 kV substations.

On the east side of 330 kV Substation, near the OHL MGRES 2 bay, there are several free fields for a possible extension of the substation. The new bay will be placed on the east side of the 330 kV Chisinau substation, near the current OHTL MGRES 2 bay, where there is available space.

Along with the new bay, it is necessary to extend each busbar with 1 field having a width of 24 m. Similar to OHL bays in the substation, the new bay shall occupy two nearby fields for the connection, through circuit-breakers, to each of the two busbars.

The circuit I-VI shall be performed toward the substation limit, where there is enough space for the connection to the collector busbar I. For this circuit, it is necessary to ensure the busbars overpassing toward the location of the new autotransformer, through four spans.

The width for each field of the bay will be of 24 m. Busbars and bay circuits which are the object of the project will be made of flexible conductors.

It is envisaged in the future the extension of 400 kV bay with 400 kV busbar and a new OHTL connection. The arrangement of 400 kV equipment will take into consideration the installation in the future of new equipment.

The new autotransformer consists of three single phase unit Autotransformer of 630 MVA (3x210 MVA) with a spare unit. The solution with one spare unit reduces the unavailability time in case of damage in one of the single-phase units.

The autotransformer will be equipped with a nitrogen injection system for prevention of explosion and fire on transformers and all necessary accessories, including a monitoring installation.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 14/207

The tertiary of the new AT will be used for supplying AC auxiliary services of the Substation (the cable connection with AC auxiliary services are not part of this project). For this purpose, a new 35/0.4 kV, 560 kVA Auxiliary Transformer, supplied by the autotransformer tertiary, is provided. This transformer shall be identical with the ones existing in Chisinau Substation. In this respect, the technical documentation of existing auxiliary transformers will be made available by ME and will be used as reference.

The existing compressor building (compressor installation is currently dismantled) will be adapted for installing protection cubicles pertaining to the new AT and 400 kV OHTL bays. The existing earthing system will be extended for the new bays (galvanized steel). After executing the earthing system, before commissioning, measurements will be performed, to determine the dispersion resistance of the earthing system, of the step and touch voltage.

The existing outdoor lighting installation will be extended for the new bays and shall be LED spotlights illumination with automatic movement switching on for the personnel moving within the switchgear areas in periods of darkness. The limit between the OHTL and the 400 kV bay is defined as per following sketch:

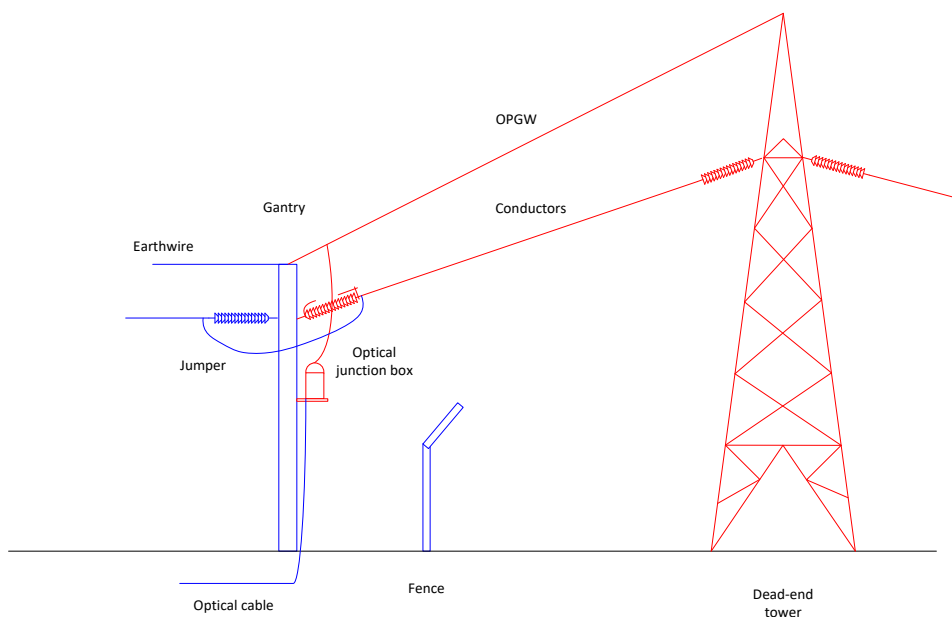



Figure 1-1: The connection of the Chisinau Substation and OHTL 400 kV

As usual, the limit is the gantry of the substation, with following attribution:

Table 1-1: Equipment of the Chisinau Substation and 400 kV OHTL

Work	Substation	Overhead Line
Dead-End tower		X

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 15/207
---	--	---------------------

Work	Substation	Overhead Line
Conductors down to the gantry, including dead-end clamp, U-bolt as well as + insulator strings with adjustable spark gaps.		X
OPGW and conversion/earthwire down to the gantry, including clamps		X
Splice box including console		X
Gantry	X	
Conductors from gantries	X	
Conductor jumpers	X	
Earthwire from gantries (if exist)	X	
Optical cable from splice box, including splicing and commissioning	X	
Fence	X	

Both contractors are requested to define well in advance the conditions of work for the transmission line Contractor inside the substation

1.3 Purpose of the site-specific ESIA

The purpose of the site specific environmental and social impact assessment performed at the detailed design stage is to identifies environmental and social aspects and hazards, assesses risks and establishes mitigation measures to control risks and set functional requirements for implementation of the present document.


Objectives of the site specific environmental and social impact assessment are to comply with provisions of the Loan Agreement and the Environmental and Social Commitment Plan and the Environmental Permit no. 1/4745 of December 31, 2019 issued by the Environmental Agency.

The present document shall be disclosed on the web site of MEPIU, the Beneficiary S.E. Moldelectrica and Bacioi Mayoralty in order to have access to the environmental and social information all interested parties and community from the village Braila and the commune Bacoii. The feed-back received from all interested parties shall the role to improve the Site Specific ESIA/ESMP.

1.4 Approach and methodology of the ES impact assessment

1.4.1 General procedure

The scope of the environmental and social impact procedure (methodology) is to determine aspects that it can control and that it can influence and their associated environmental and social impact, considering the project life cycle. The procedure describes responsibilities, approach and methodology for environmental and social aspects and hazards identification, risks assessment and control risks specific for the project life cycle.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 16/207
---	--	---------------------

The risk assessment objectives are the following:

- To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with WB's OP 4.01 Environmental Assessment and applicable national ES laws;
- To adopt a mitigation hierarchy approach to: (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible;
- To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project;
- To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate;
- To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.

1.4.2 Environmental and Social Impact Assessment Approach specific for DD stage

1.4.2.1 General

The objectives of the environmental and social risks identification are to identify and categorize risks that could affect the project and to document these risks. The outcome of the risk's identification process is a list of risks mitigation measures that is comprehensive and nonoverlapping. The identified risks at the detailed design are the basis for estimating and managing project's mitigation measures. Any changes and improvements in the design also lead to new risks which shall be assessed and controlled. Risks which are part of ESMP shall be monitored, controlled and manage contingency throughout the design process.

Although risks were identified during the feasibility stage, risk identification during the design shall invite new risks as design develops.

The risk impact assessment procedure at the detailed design stage is the same as it was used at the feasibility stage and consists of risks identification, risks assessment and risks control by providing mitigation measures to protect the environment and social and respond to changing environmental and social conditions in balance with socio-economic needs.

It specifies requirements that enable MEPIU/ME to achieve the intended outcomes it sets for its development of the ESIA/ESMP specific for the construction and operational stages and for the Contractor and the Beneficiary to implement the present document.

The flow chart of the risk assessment procedure is presented in the figure below.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 17/207

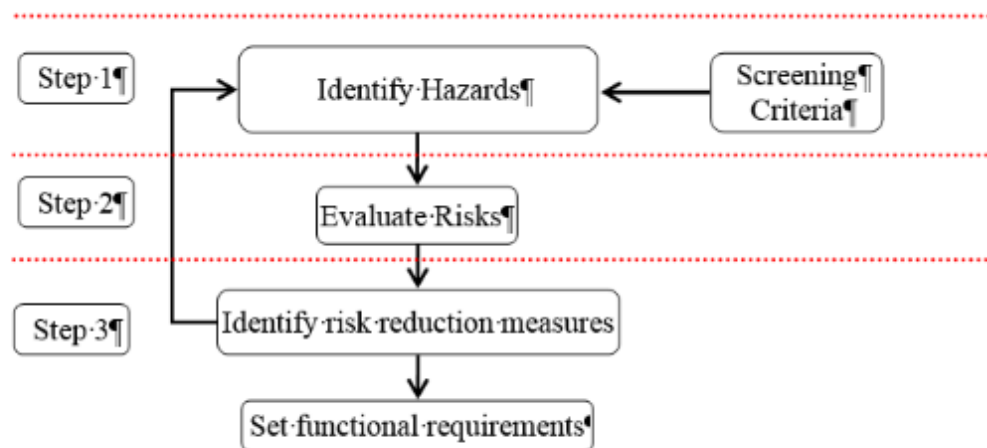


Figure 1-1: Risks assessment procedure/methodology

The environmental and social impact assessment approach specific for detailed design stage is determine the environmental and social aspects and establish requirements for controlling risks and setting functional requirements for contributing to sustainable development for construction and operation phase by:


- protecting the environment by preventing or mitigating adverse environmental impacts;
- mitigating the potential adverse effect of environmental conditions on the construction and operational stages;
- assisting the Contractor and the Beneficiary in the fulfilment of compliance obligations;
- enhancing environmental and social performances;
- controlling or influencing the way the Contractor's products and services are designed, manufactured, distributed, consumed and disposed by using a life cycle perspective that can prevent environmental impacts from being unintentionally shifted elsewhere within the life cycle;
- achieving financial and operational benefits that can result from implementing environmentally sound alternatives that strengthen the Beneficiary's market position;
- communicating environmental and social information to relevant stakeholders.

1.4.2.2 Screening criteria for risks assessment

1.4.2.2.1 The World Bank ES requirements

According to the World Bank's OP 4.01 Environmental Assessment and management of environmental and social risks and impacts, the Borrower will manage environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and the potential risks and impacts.

Borrower will conduct environmental and social assessment at the detailed design stage to help ensure that project is environmentally and socially sound and sustainable. The environmental and

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 18/207
---	--	---------------------

social assessment will be proportionate to the risks and impacts of the project. It will inform the design of the project, and be used to identify mitigation measures and actions and to improve decision making.

1.4.2.2.2 The applicable Republic of Moldova ES requirements

1.4.2.2.2.1 The applicable requirements for technical design

According to the Environmental Permit¹ issued by the Environmental Agency for this Project and the applicable legislation of the Republic of Moldova, in order to ensure the quality criteria for the designed facility, in the design documentation shall be included, the following essential requirements: **A** - strength and stability; **B** - operational safety; **C** - fire safety; **D** - hygiene, human health, restoration and protection of the environment; **E** - thermal insulation, water repellent and energy saving and **F** - protection against noise.

The preparation of the design documentation is performed in case of holding the Urbanism Certificate for Design (UCD) issued by the Local Public Authority (LPA), based on the technical concept for design with initial data for design and the results of technical surveys, taking into account the solutions adopted in urban planning documentation.

The elaboration phases of the design documentation are established by the Contractor which is responsible for development of the detailed design, in the technical concept for design based on UCD, taking into consideration the category, importance, type and complexity of the object/facility.

The detailed design must, by its form and content, be in line with the valid standards and regulations in Moldova, in order to acquire necessary approvals, permits and licenses based on it.

The following documents have been received before starting the detailed design process issued by the State Supervision Agencies in order to be in compliance with applicable Republic of Moldova ES requirements:

- Urbanism certificate for design no. 154 of 09.12.2021 issued by the Mayor of the commune Bacioi, in the conformity with requirements of the provision of the Law no. 163/2010 regarding the authorization of the construction works execution, by complying with Urbanistic General Plans of the commune Bacioi for development of the basic and detailed design,
- Sanitary Notice no. 12 of 10.03.2021 regarding endorsement of the 400 kV OHTL corridor Vulcanesti – Chisinau & Chisinau SS issued by the Centre for Public Health Chisinau,
- Notice no. 01-6-10/1564 of 16.09.2021 issued by the Institute for Territory Organization and Land Management (IPOT) for Chisinau SS,

¹ The Environmental Permit no. 1/4745 of December 31, 2019:

https://moldelectrica.md/files/docs/md_ro_project/Acord_de_Mediu_BtB_LEA_400%20kV_Vulcanesti-Chisinau.pdf



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 19/207

- Archaeological Notice no. 236 of 23.09.2021 issued by the National Archaeological Agency for Chisinau SS,
- Notice no. 08/5-09/4934 of 11.09.2020 issued by the Ministry of Culture regarding endorsement of the 400 kV OHTL corridor Vulcanesti – Chisinau and Chisinau SS,
- Notice no. 10/2-805/21 of 12.94.2021, issued by the Technical Supervision Agency for endorsement of the 400 kV OHTL corridor Vulcanesti – Chisinau and Chisinau SS,
- Notice no. 08/1159 of 27.10.2021, issued by the State Meteorological Service for upgrading the Chisinau SS,
- Notice no. 3426 of 28.10.2021, issued by the Civil Aviation Authority for upgrading the Chisinau SS,
- Soil Investigation Report.

1.4.2.2.2 Risk assessment traceability from Feasibility and Pre-design stages

In 2015, EBRD hired an independent consultant to prepare the Feasibility Study² (FS) and the Environmental and Social Impact Assessment (ESIA)³, the Environmental and Social Management Plan (ESMP)⁴ and a Land Acquisition and Compensation Framework (LACF). The Project was classified as category “A” by EBRD and EIB and a full Environmental and Social Impact Assessment was performed. Since the financial arrangements among donors for the entire Project was agreed only in 2017, the developed ESIA&ESMP and other safeguards instruments, as well as the FS, cover all components of the asynchronous interconnection program that correspond to the requirements of both the EBRD/EIB/EU financed Project and the World Bank.

The Social and Environmental safeguard documents necessary for PSDP implementation activities were developed at the pre-design stage, within PSDP preparation ECAPDEV Grant No. TFOA6821. The safeguards documents include: Safeguards Summary Note on Environmental and Social Impact Assessment (ESIA); Environmental and Social Management Plan (ESMP) for SE Moldelectrica’s new HQ building; Resettlement Policy Framework (RPF); Stakeholder Engagement Plan (SEP)⁵; Gender and Citizen Engagement Strategy and Institutional Assessment of Project Implementing Agencies.

The ESMP, developed at the FS/ESIA, summarizes specific requirements to avoid or mitigate potential environmental and social impacts required by the ESIA and the applicable standards. The ESMP is considered to be a “living” document that shall be updated at the detailed design stage by taking into consideration specific data from DD process, social aspects, avian risks, resettlement risks, OHS risks etc. and the Site Specific ESIA/ESMP (requirements) developed at the DD stage shall be used for construction, operation, and decommissioning of the project as needed to ensure compliance with the applicable standards by the Contractor and the Beneficiary (Operator).

² Source: Feasibility Study - https://moldelectrica.md/ro/finances/connection_project

³ Source: https://moldelectrica.md/files/docs/md_ro_project/ESIA_Annexes_Interconnection_Md_Ro_EN_July%202017.pdf

⁴ Source: https://moldelectrica.md/files/docs/md_ro_project/ESIA_Annexes_Interconnection_Md_Ro_EN_July%202017.pdf

⁵ Source: https://moldelectrica.md/files/docs/md_ro_project/SEP_Interconnection_Md_Ro_RU_24.07.2017.pdf



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 20/207

The ESMP, developed at the SF phase, required that a number of more detailed E&S management plans and programs be prepared, including:

- 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);
- The Code of Conduct;
- Construction and Post-Construction Bird Monitoring Programs;
- Vegetation Management Plan.

These plans and programs are part of the FS/ESIA/ESMP, and shall be revised, improved and approved at the detailed design stage prior to construction.

MEPIU is be responsible for further risk assessment procedure by preparing ToRs and engaging individual consultants to prepare risk assessment reports. The Site Specific ESIA/ESMPs are subject to review (Non objections) by the World Bank and finally to be approved by MEPIU.


1.4.2.2.3 Site visits

The site visits to the Chisinau SS were performed to specifically identify those areas / sites that may be critical under environmental and social aspects. Here, the objective was to identify any sections or locations that may require an optimization of the pre-defined location to avoid or at least minimize any environmental and social conflicts or risks and to also minimize impacts on land ownership.

1.4.2.2.4 The Project Area of Influence

With regard to social and socio-economic impacts, the Project Area of Influence (PAI) is determined by the land plot inside of the existing Chisinau Substation, property of S.E. Moldelectrica with the surface of 7.5582 ha.

The construction activity shall be taken place inside of the Chisinau Substation, the possible environmental impacts shall mainly relate to construction. The PAI will thus include the actual footprint of the Project as above and any land beyond this area which may be temporarily used for

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 21/207
---	--	---------------------

construction: (i) Any access and transport roads; (ii) Stockpile or backfill areas; and (iii) The area of the contractor’s yard, etc.

At the construction stage the Contractor shall comply with environmental and social requirements described in the present document and before starting the construction activities the Contractor shall develop its own the Contractor’s Environmental & Social Management Plan (CESMP) and explain how the Contractor shall control all environmental and social risks to be in compliance with requirements of the present document.

At the operational stage, the Chisinau Substation shall be regularly inspected to ensure the sustainability and the operability of the new installed equipment and the entire substation. The key maintenance activities shall include the operation of the Chisinau Substation based on the manufacturer recommendation and the Company maintenance program.

1.4.2.3 Identification of potential impacts and mitigation measures

The identification of potential impacts of proposed Project on the environment and socio-economic condition was based on the existing information available related to the baseline condition, the technical characteristics of the investment and similar experience with other transmission line projects.

The impact assessment conducted on a case-by-case basis, depending on certain environmental and socio-economic aspects, was focus on specific condition that has to be respected in order to ensure the safety and integrity of the Project.

As a result of evaluation, the potential impacts of the Project on the physical, biological and socio-economic resources, mitigation measures were identified that the Project will take in order to avoid, minimise/reduce and mitigate adverse impacts and to enhance positive impacts where applicable.

Where relevant, the anticipated impact was compared with applicable environmental requirements and standards. The impact assessment methodology considered potential change on the physical, biological and socio-economic environment in relation with criteria set out according to their extent/scale, duration, intensity/magnitude and probability; the criteria used for impact assessment are presented in Table no.1-1.

Table no. 1-1: Matrix for evaluation of significance of potential impacts

Significance Criteria		
Extent/ Scale	On-site	Impacts limited to the boundaries of development site, namely: areas around the OHTL route and substation
	Local	Impacts that affect areas nearby the boundaries of development site



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 22/207

	Regional	Impacts that affect important environmental resources at the regional scale, define by administrative boundaries, habitats/ecosystems types
	National	Impacts that affect important environmental resources or important areas at the national scale
Duration	Temporary	Impacts are predicted to be of short duration and intermittent / occasional
	Short-term	Impacts are predicted to be only during the construction period
	Long-term	Impacts are predicted to be only during the project lifetime
	Permanent	Impacts are predicted to cause a permanent change in the affected receptors or resources, beyond the project lifetime
Intensity/ Magnitude	Negligible	The impact on the environment is not detectable
	Low	Small detectable change to environment but with proper planning does not cause damage to the environment
	Moderate	Larger detectable change to environment that can be controlled by implementing the proper measures
	High	Fundamental change to the environment that altered the natural functions and processes
Probability	No probability	The impact should not occur during normal operation and conditions
	Average probability	The impact is likely to occur sometimes
	High probability	The impact is likely to occur during the project lifecycle

The significance of potential impacts, a function of extent, duration, intensity/magnitude of the impact and the probability of impact occurring, was categorized into the following significance categories:


- Negligible: no detectable change to the environment;
- Minor: the impact magnitude is sufficiently small and well within relevant environmental limits and standards;
- Moderate: the impact magnitude is within relevant environmental limits and standards;
- High: the regulatory limits and standards may be extended or large magnitude impacts occur to resources/receptors.

The mitigation measures proposed in case of probability of significant damage on the environment are consistent with requirements of relevant legislation and policies, as well as international practices.

For socio-economic environment where positive impacts may occur, in order to establish the significance of impact the same matrix was used; in case of intensity/magnitude the same scale was used for assessing the positive impacts, marked as positive, e.g. Negligible (positive).

For positive impacts the following significance categories were defined:

- Negligible (positive): positive changes affecting a few individuals;
- Minor (positive): positive benefits to a small section of the community;

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 23/207
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- Moderate (positive): changes affecting a significant section of the community;
- High (positive): massive changes positively affecting majority of population.

1.5 Organization of the ES impact assessment report

The ESIA report includes:

- a) The Basic Design which include the approved Plans and Profiles specific for the Mayor of the commune Bacioi,
- b) Detailed Design and report for checking and approval by the State Authority for DD approval;
- c) The final ESIA/ESMP for upgrading the Chisinau Substation with public consultation report;
- d) Public Consultation Report and minutes of consultation within the Stakeholder Engagement Plan updated at the detailed design stage;
- e) Notices issued by the National Archaeological Agency and Archaeological discharge Certificates;
- f) Implementation work plan developed by the Contractor and approved by MEPIU/ME.


The Site Specific ESIA/ESMP contains 12 chapters and set out the aspects to keep the construction and operational processes under control. The Site Specific ESIA/ESMP shall be approved by the MEPIU and it shall become effective on the date of its approval.

The Site Specific ESIA/ESMP shall be published on the MEPIU, Moldelectrica and Bacioi Mayoralty's web pages and can be printed in a required number of copies at the request of stakeholders and distributed under signature to the designated recipients. The Site Specific ESIA/ESMP shall be held by stakeholders under conditions of integrity and legibility and shall be available for consultation to all stakeholders and workforce.

The Site Specific ESIA/ESMP may be furnished to the State Authorities, customers, etc. upon prior approval of the MEPIU/ME.

At the construction stage, the Contractor shall use the document to develop its own Contractor ESMP and OHS Plan and to evaluate compliance with requirements established in the Site Specific ESIA/ESMP.

At the operational stage, the Beneficiary Moldelectrica shall use the Site Specific ESIA/ESMP for compliance with applicable environmental and social laws of the Republic of Moldova and International Best Practices and report its environmental and social performances to interested parties.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 24/207
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CHAPTER 2: POLICY AND REGULATORY FRAMEWORKS

The Association Agreement between the European Union and the European Atomic Energy Community and their Member States and the Republic of Moldova was signed on June 27, 2014. The Agreement was ratified by the Parliament of the Republic of Moldova on July 2, 2014 and by the European Parliament on November 13, 2014.

Following the signature of the Agreement, the country committed to implement the relevant environmental legislation of the European Union into its national legal system by adopting or changing national legislation, regulations and procedures aiming at political association and economic integration with the EU. This Agreement includes binding provisions, regulatory norms and broader cooperation arrangements in all sectors of interest. Therefore, the EU directives have become directly relevant to all aspects of green city development and are discussed separately per sector and key issue. The achievement of commitments started with the adoption of the National Implementation Plan⁶ of the EU-Moldova Association Agreement for 2014-2016.

The Republic of Moldova signed the EU accession application on March 3, 2022 and was approved by EU Council on June 23, 2022.

Synchronization of electrical networks

The electrical grids of Ukraine and the Republic of Moldova were successfully synchronized with the continental European grid on March 16, 2022 (ENTSO-E).


This follows the meeting of the Energy Council on 28 February 2022, where ministers expressed their support for the rapid connection to the Ukrainian electricity grid and called for the continuation of work at all levels.

2.2 Environmental and Social Policy and Normative Acts

The key policy document within the healthcare sector regulation is the **National Public Health Strategy for 2014-2020**⁷ which is based on various international and national documents. The Framework Policy of the World Health Organization "Health 2020". with the purpose of supporting the interactions of the Government and the society in order to significantly improve the health and well-being of the population, reduction of inequalities in the field of health, consolidation of public health. As a priority, the Strategy will pursue the implementation of the Post-2014 Action Program of the International Conference on Population and Development and the post-2015 Agenda for Sustainable Development.

⁶ DG no. 808/2014: https://www.legis.md/cautare/getResults?doc_id=88616&lang=ro#

⁷ HG no. 1032/2013: https://www.legis.md/cautare/getResults?doc_id=103096&lang=ro

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 25/207
---	--	---------------------

“Greening” of economy and promotion of the sustainable procurements is reflected under the **approving the Program for the promotion of the "green" economy in the Republic of Moldova for the years 2018-2020⁸**. Among the specific objectives of the Programme is ensuring, by 2020, that **at least 15%** of all public procurement will meet sustainable procurement criteria. The Programme sets measures to achieve the objective: update the procurement instructions, considering the lessons learned in the pilot auctions; elaborate a monitoring and evaluation system regarding the implementation of the contracts concluded following the development of sustainable public procurement.

National Environmental Strategy for 2014-2023⁹ is the main document of long-term strategic planning which establishes the strategic framework on the environment protection, including protection of human health and the environment from adverse effects caused by pollutants.

National Waste Management Strategy 2013-2027¹⁰ establishes the strategic vision of waste management until 2027 as an integrated system, economically efficient and ensuring protection of human health and environment. Inter alia, the Strategy aims to promote separate waste collection and treatment for each type of waste, particularly toxic and hazardous waste. The strategy provides general information regarding with construction and demolishing waste and conditions of its management.

Development Strategy with reduced emissions of the Republic of Moldova until 2030¹¹ is a strategic document that allows the Republic of Moldova to orient towards a low carbon economy and to achieve the targets mentioned the document "Intentional determined national contribution" through green sustainable development, based on the socio-economic priorities of the country's development.

Also, this Strategy supports the achievement of sustainable development objectives, providing a national strategic context to the mitigation efforts for which the country receives international support. The specific objective 1 of the Strategy is to reduce, until 2030, the GHG emissions from the energy sector by 74% (unconditional) and up to 82% (conditioned) compared to 1990 level.

National Strategy on Energy Efficiency until 2030¹² is the key policy documents that look at measures that country will take regarding these future CO₂ emission limits. It is expected, that in the next decade, 2021-2030, carbon capture and storage technology will have to prove economically viable in order to be allowed to actively enter the market, thus substantially altering the structure, values, prices and costs, of fuel for the latest technologies. Between 2021-2030, smart grid technologies and equipment will clearly prove to be economically viable and will become a de facto standard for the electricity industry. This type of structuring of the energy system will greatly


⁸ GD no. 160/2018: https://www.legis.md/cautare/getResults?doc_id=102127&lang=ro

⁹ GD no. 301/2014: https://www.legis.md/cautare/getResults?doc_id=114539&lang=ro#

¹⁰ GD no. 248/2013: https://www.legis.md/cautare/getResults?doc_id=114412&lang=ro#

¹¹ GD no. 1470/2016: https://www.legis.md/cautare/getResults?doc_id=129232&lang=ro#

¹² GD no. 102/2013: https://www.legis.md/cautare/getResults?doc_id=68103&lang=ro#

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 26/207
---	--	---------------------

change the existing approaches of the topologies, balancing, measurement, monitoring and energy mix of the system. All these changes will act in favor of the assimilation of increasing quotas of electricity from renewable sources.

Under the social and equal opportunities agenda, the Government developed the **National Strategy on Gender Equality 2017-2021¹³** and a **Strategy on Violence Against Women and in family 2018-2023¹⁴**. The aim is to response to gender-based violence through improving quality of services for survivors and prevention of the violence.

In mean time, Government approved a **National Youth Development Strategy 2020 and a Youth Gap Index** tool for mainstreaming youth priorities, although there remain gaps in data and weaknesses in monitoring youth policies.

The national development strategy "European Moldova 2030"¹⁵, the document that indicates the country's development directions in the next seven years, was approved in October, 2022 by the Parliament in the first reading,

The Strategy, presented to the deputies represents a long-term strategic vision, which adapts to the national context the priorities of the international commitments assumed by our country according to the Association Agreement and those deriving from the status of a candidate country for accession to the European Union.

The development objectives contained in the strategy reflect the aspirations of increasing the well-being of the people of the Republic of Moldova, improving the lives of citizens, Europeanizing state institutions, strengthening democracy, the rule of law and respect for human rights.


The document establishes ten general objectives, used to measure the quality of life at the level of the European Union. These are: increasing income from sustainable sources and mitigating inequalities; improving living conditions; guaranteeing relevant and quality education throughout life; raising the level of culture; improving the physical and mental health of the population; solid and inclusive social protection system; efficient, inclusive and transparent governance; fair, incorruptible and independent judiciary; peaceful and secure society; healthy environment. The project aims to achieve concrete indicators by 2030, for example – reducing absolute poverty by at least 50%. If GDP growth will be higher than the planned annual level of 5% until 2030, respectively.

The strategy will be the reference document in the process of developing the medium-term budgetary framework and defines, including, the strengthening of the resilience of the Republic of Moldova in

¹³ GD no. 259/2017: https://www.legis.md/cautare/getResults?doc_id=99875&lang=ro

¹⁴ GD no. 281/2018: https://www.legis.md/cautare/getResults?doc_id=101802&lang=ro

¹⁵ Law no. 315/2022 for the approval of the National Development Strategy "European Moldova 2030" (published in OM no. 409-410/2022)

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 27/207
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the event of new crises. The document will also guide the assistance of development partners in relation to national development priorities and ensure better coordination of assistance projects.

2.3 Environmental assessment vetting process

The environmental vetting process is a procedure for verification and checking of the package consisting of the Basic Design and Detailed Design Reports, Stakeholders Engagement Plan revised at the detailed design stage and the Site Specific ESIA/ESMP for the upgrading 330/110/35 kV Chisinau SS by the World Bank and the State Authorities of the Republic of Moldova.

According to the World Bank requirements, the draft Site Specific ESIA/ESMPs are subject to review (Non objections) by the World Bank and public consultation shall be organized and the interested public shall have access to the environmental and social information. Feed-back from stakeholders and other interested parties shall be documented and complaints, proposals and comments, complaints and additional mitigation measures for document improvements shall be taken into consideration for document review and improve. Finally, the draft Site Specific ESIA/ESMP shall be submitted to the World Bank for review and issuing non-Objection.

The State Authority shall verify and check the detailed design package including also the Site Specific ESIA/ESMP. The Beneficiary shall submit to the Local Public Authority the following documents for receiving the Construction Authorization/Permit:

- The Urbanism Certificate for Design issued by the Local Public Authority with the Environmental Permits no. 1/4745/2019, Notice from the National Agency for Public Health and the Notice issued by the Technical Supervision Agency;
- The Basic Design and the Detailed Design developed by the Contractor;
- The Report for the verification of project documentation for construction;
- The Certificate for the company registration;
- The Contract of the author supervision signed by the Beneficiary and designer;
- Notice issued by the Ministry of Culture for protected monuments;
- Archaeological notice issued by the national Archaeological Agency;
- The Law no. 120/2022 on the declaration of public utility & national interest of the 400 kV OHTL,

The Local Public Authority shall issue the Construction Authorization within 30 days for the upgrading the 330/110/35 kV Chisinau SS.

2.4 Other important social and environment regulations

The Republic of Moldova is characterized by a new legislative base, that most of it was harmonized with EU Acquis Communautaire according to Association Agreement. Some of the main laws related to the project proposal and activities that will be implemented are presented in the Table below.


 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 28/207
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Table 2-1: Main national legal environmental and social acts relevant to the Project

Legal act	General overview	Relevancy with the Project
Applicable Environmental Laws		
Forest Code no.887/1996	Establishes the legal framework in the field of managing the national forest fund	Provides basic rules regarding the forest protection and the management of forest fund, etc.
Law on the Environmental Protection no. 1515/1993	Establishes the basic legal framework for drafting special normative acts and instructions issues of environmental protection	Provides basic rules regarding air quality conditions, rights and duties of each actor with activities with potential impact to environment, - to be used while conducting ESA for project activities
Law on Environmental Impact Assessment no. 86/ 2014	Establishes the goal of preparing documentation on the Environmental Impact Assessment (EIA), its procedure, coordination and approval, and includes the List of objects and types of activities for which an EIA is compulsory prior to their design	This law is not relevant for proposed activities under the Component 1 and Component 2 as the proposed activities are not listed in the Annex 1 of this law
Law on Green Spaces of the Urban and Rural Localities no. 591/1999	Regulates relations in the field of development and protection of green spaces in urban and rural localities in order to ensure the right of everyone to a healthy and aesthetic environment	Regulates the identification and delineation of the green areas within the settlements' areas
The Water Law no. 272/2012	Establishes the legal framework necessary for the water management, protection and use	It is relevant as it specifies the procedures for obtaining water authorizations
Land Code no. 828/1991	Establishes the relations and rights of land ownership and the basic requirements of land use and protection	It is or establishing the procedures, duties and obligations under administration of the land
Law on access to information no. 982/2000	This law shall govern the rights of access to information of public importance held by public authorities, with a view to exercising and protecting the public interest to know and attaining a free democratic order and an open society	This is relevant for ensuring disseminating information about implementation of the project and about potential ES impacts
Law on Wastes no. 209/2016	The law sees that waste management methods will not endanger the environment, peoples' health and other living organisms. Authorities in charge are authorizing waste collecting, transportation, exploitation and disposal activities, avoiding water, soil, flora, fauna, phonic and air pollution. New methods must not endanger landscapes or protected areas	This is relevant for ensuring the waste management at the level of each institution for the solid waste management, including hazardous ones (in particular, asbestos)
Law on Air Protection no. 1422/1997	The law has the objective to maintaining the air quality and improving the air quality - component of the environment, preventing and reducing the adverse effects of physical, chemical, biological, radioactive and other factors on the atmosphere, with adverse consequences for the population and/or the environment, and regulates the activity of individuals and legal entities, irrespective of type of ownership and legal form of organization, when he/she directly or indirectly affects or may affect the air quality.	The law is relevant and requires measures for ensuring the air quality for the activities related to energy sector as well as to small civil work and also for ensuring the legal requirements for noise during small civil works
Applicable Social Laws		
Law on Social Inclusion of Persons	The law regulates the rights of persons with disabilities for their social inclusion, guaranteeing the possibility of their	The law is relevant and requires measures for ensuring



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 29/207

Legal act	General overview	Relevancy with the Project
with Disabilities no. 60/2012	participation in all areas of life without discrimination, at a level identical to the other members of the society, having as a basis the respect of fundamental human rights and freedoms	the participation of person from socially vulnerable groups in the project activities, to promote and defend their interests
Law regarding the promotion of employment and unemployment insurance no. 105/2018	The purpose of the law is to prevent and reduce unemployment and its social effects, reduce the risk of unemployment and ensure a high level of employment and adapting to the demands of the labor market	The law is important to ensure the rights of employees
Law on Social Services no. 123/2010	The law establishes the general framework for the creation and functioning of the integrated system of social services, with the determination of the tasks and responsibilities of the central and local public administration authorities, of other legal and natural persons empowered to provide and provide social services, as well as the protection of the rights of the beneficiaries of social services;	The provisions of the law are important for ensuring the quality of public services and respecting the interests of consumers
Law on State Supervision of Public Health no. 10/2009	This law regulates the organization of the state supervision of public health, establishing general requirements to public health, the rights and obligations of physical persons and legal entities, procedure for the organization of system of the state supervision of public health. The Purpose of this law is providing optimum conditions for the maximum realization of potential of health of everyone throughout all life by means of organized efforts of society on the prevention of diseases, protection and promotion of health of the population, improvement of quality of life	It is relevant for the project and its stipulations need to be reflected in the ESIA documents
Law on occupational safety and health no. 186/2008	The present Law (1) regulates the legal reports regarding the establishment of measures regarding the safety and health of the workers in the workplace; (2) establishes the general principles regarding the prevention of occupational risks, the protection of workers at workplace, the elimination of risk and accident factors, the information, the consultation, the balanced participation, the training of the workers and their representatives.	The law is relevant and is mandatory to be followed in the case of both Components activities, ensuring OHS issues.
Law on ensuring equal opportunities between women and men no. 5/2006	The purpose of the Law is to ensure the exercise of their equal rights by women and men in the political, economic, social, cultural, other spheres of life, rights guaranteed by the Constitution of the RM, in order to prevent and eliminate all forms of discrimination according to the criteria of sex. The Law also introduces the notion of affirmative actions	The provisions of the law are important for promoting women's interests in exercising their rights in labor relations
Law on Access to Information no. 982/2000, as amended in 2003-2011-2015	The law regulates the interaction between the providers of information and individuals and/or legal entities during the exercise of their constitutional right to access information, the rights of applicants for obtaining the information, the obligations of information providers to ensure access to official information, methods of safeguarding the right to information	This is relevant for ensuring disseminating information about implementation of the project and about potential ES impacts
Law on Freedom of Expression no. 64/2010, as amended in 2012-2013-2015	This Law guarantees right to freedom of expression and regulates the balance between right to freedom of expression and defense of private and family life	This is relevant for ensuring disseminating information about implementation of the project and about potential ES impacts




MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 30/207

Legal act	General overview	Relevancy with the Project
Law on Transparency in Decision Making no. 239/2008	The law refers to the transparency of information linked with the decision-making process and to the consultation of stakeholders when drafting decisions	This is relevant for ensuring disseminating information about implementation of the project and about potential ES impacts
Administrative Code of Republic of Moldova no. 116/2018	The Code establishes procedure for consideration of petitions of the RM citizens addressed to the relevant authorities/bodies (further - "bodies") for the purpose of ensuring protection of petitioners' rights and legitimate interests	This is relevant for ensuring for the early collection of information regarding the risks of non-compliance with ES standards
Other normative acts tangential to the Project		
Administrative Code of Republic of Moldova no. 116/2018	The Code establishes procedure for consideration of petitions of the RM citizens addressed to the relevant authorities/bodies (further - "bodies") for the purpose of ensuring protection of petitioners' rights and legitimate interests	This is relevant for ensuring for the early collection of information regarding the risks of non-compliance with ES standards
Law on authorization of the executing the construction works no.163/2010	The purpose of this law is to legalize the way of authorizing, approving and verifying the design work, execution or demolition of the buildings and approximate area according to urbanism planning and spatial planning documentation, by applying the system of normative documents in construction and in order to ensure transparency and visibility when issuing administrative acts and creating favourable conditions for the business environment. The provisions of the law are mandatory for authorizing the execution of constructions of any kind, category, destination and type of property, except for objects of a military or secret character, which are specifically authorized	This law is relevant, and its requirements are applied for all civil works
Law on Quality in Construction no.721/1996	The provisions of this law are applied to construction and related facilities, hereinafter referred to as the building industry, in the design, construction and building, as well as in the stages of exploitation and interventions to existing buildings and post-utilization them, regardless of their form of ownership, destination, category and class or source of funding, in order to protect people's lives their goods, society and the environment	The law provisions are relevant to proposed activities and should be reflected ESA documents for all proposed civil work
Law on the protection of archaeological heritage no. 218/2010	This law regulates the general legal regime of archaeological discoveries and research, as well as the protection of archaeological heritage, a component part of the national cultural heritage.	Relevant at the request of the urban planning certificate for design in accordance with the Law relating to the authorization of executing the construction works No, 163/2010, in the case of construction works involving interference with the ground, regardless of the type of work contemplated, and the form of the ownership of the land.
Law on expropriation for reasons of public utility no. 488/1999	The law establishes the method and procedures for land expropriation	The law provisions are relevant to proposed activities on expropriation of land for reasons of public utility
Law regarding the normative price and the method of sale-	The law establishes the method and procedures regarding the normative price and the method of sale-purchase of land	The provisions of the law are relevant for the proposed activities regarding the expropriation of land for

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 31/207
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Legal act	General overview	Relevancy with the Project
purchase of land no. 1308/1997		reasons of public utility and the establishment of the price for these lands
Law regarding the authorization of the execution of construction works no. 163/2010	This law regulates the legal procedures regarding the authorization of the execution of construction works	Relevant at the request of the urban planning certificate for construction
Law regarding the principles of urban planning and territorial development no. 835/1996	This law regulates the legal procedures regarding principles of urban planning and territorial development	Relevant at the request of the urban planning certificate for construction
Law on local public administration no. 436/2006	The law establishes the rights, obligations and competences of the local public administration	The provisions of the Law are relevant to proposed activities on created of the Social Impact Monitoring Committees (SIMCs) and the activities of collaboration of all stakeholders with the SIMC.
Law regarding the protection of monuments no. 1530/1993	The law establishes measures for the protection of cultural monuments, in the case of the construction of some objects.	The provisions of the Law are relevant for solving problems, in case of damage to monuments, at the construction stage

2.5 International Treaties related to environment and social standards

The design of the equipment shall fundamentally consider the most severe conditions to which they will be subjected during manufacture, transport and handling, installation, testing and operation.

The dimensions of the parts which are exposed to repetitive and alternating stresses as well as to impacts and vibrations shall take into account the safety measures approved in practice.

The standards for the design of the 400 kV OHTL shall be:

- Standards and regulations from Moldova;
- PUE Standard (ПУЭ 7 Правила устройства электроустановок);
- EN 50341-1: 2012 Overhead electrical lines exceeding AC 1 kV – Part 1: General Requirements – Common specifications (English version);
- IEC standards;
- CIGRE Publication no. 196: "Diaphragms for Lattice Steel Towers";
- CIGRE Publication no. 348: "Tower Top geometry and mid-span clearances";
- CIGRE Publication no. 273: "Overhead conductor safe design tension with respect to Aeolian vibrations";
- IEEE Standards,
- ASCE 10 Design of Latticed Steel Transmission Structures, or other equivalent international standards as approved by the Employer.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 32/207

In regards of environmental and social protection, national government and funding agencies regulations shall be applicable.

Except if otherwise specified, where such standards are mentioned, the latest revision or edition on the Base Date shall apply.


When the Contract Documents contain particular specification or more restrictive specification than required in Standards and Codes listed above, the Contract Documents will always prevail.

Where requirements are specified by reference to a standard which has its origin in one country, it is not the intention to restrict the requirements solely to that standard and that country. The Contractor may propose to the Employer an equivalent standard other than that specified, in which case he shall submit the proposed standard and shall submit written proof that his proposed standard is equivalent in all significant respects to the standard specified. All submissions shall be made in English language.

Specific for environment and social requirements, the Contractor shall abide by the requirements of the MEPIU's (Employer) Environmental and Social Management Plan (ESMP) developed by MEPIU in parallel with the detailed design process.

International environmental treaties to which the Republic of Moldova is a Party:

1. Convention on long-range transboundary air pollution (Geneva, November 13, 1979)
2. Convention for the Protection of the Ozone Layer (Vienna, March 22, 1985):
3. Convention regarding environmental impact assessment in a transboundary context (Espoo, February 25, 1991);
 - Protocol on strategic environmental assessment (Kiev, May 21, 2003)
4. Convention on the Transboundary Effects of Industrial Accidents (Helsinki, March 17, 1992):
5. Convention on access to information, justice and public participation in environmental decision-making (Aarhus, June 25, 1998):
6. Basel Convention on the Control of Transboundary Transport of Hazardous Wastes and their Disposal (Basel, March 22, 1989)
7. Convention on Biological Diversity (Rio de Janeiro, June 5, 1992):
8. Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, March 3, 1973)
9. Convention on the Conservation of Migratory Species of Wild Animals (Bonn, June 23, 1979)
 - Agreement on the Conservation of African-Eurasian Migratory Water birds (The Hague, 16 June 1995)
10. Convention to Combat Desertification in Countries Severely Affected by Drought and/or Desertification (Paris, June 17, 1994)
11. Convention on the Prior Informed Consent Procedure Applicable to Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam, September 10, 1998)
12. Convention on Persistent Organic Pollutants (Stockholm, May 22, 2001)

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 33/207
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13. Framework Convention on Climate Change (New York, May 9, 1992)
 - Kyoto Protocol (December 11, 1997)
 - The Paris Agreement (April 22, 2016)
14. Convention on the Conservation of Wild Life and Natural Habitats in Europe (Bern, September 19, 1979)
15. Convention on the European landscape (Florence, October 20, 2000)
16. Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar, February 2, 1971)

International and regional human rights treaties ratified by the Republic of Moldova:


- Universal Declaration of Human Rights (adopted in 1948)
- International Covenant on Civil and Political Rights (adopted in 1966, ratified by the Republic of Moldova in 1990)
- International Covenant on Economic, Social and Cultural Rights (adopted in 1976, ratified by the Republic of Moldova in 1990)
- International Convention on the Elimination of All Forms of Racial Discrimination (adopted in 1965, ratified by the Republic of Moldova in 1993)
- Convention on the elimination of all forms of discrimination against women (adopted in 1979, ratified by the Republic of Moldova in 1994)
- Convention on the Rights of the Child (adopted in 1989, ratified by the Republic of Moldova in 1993)
- UN Convention Against Torture (adopted in 1984, ratified by the Republic of Moldova in 1995)
- European Convention for the Protection of Human Rights and Fundamental Freedoms (adopted in 1950, ratified by the Republic of Moldova in 1997)
- Revised European Social Charter (adopted in 1966)
- Convention on the Rights of Persons with Disabilities (adopted in 2006, ratified by the Republic of Moldova in 2010)

2.6 World Bank Operational Policies

The WB's environmental and social safeguard policies include both Operational Policies (OP) and Bank Procedures (BP). Safeguard policies are designed to protect environment and society against potential negative effects of projects, plans, programs and policies.

The WB requires environmental assessment of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making.

The environmental assessment is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. The environmental assessment evaluates a project's potential environmental risks and impacts in its area of influence;

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 34/207
---	--	---------------------

examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.

For the construction of the 400 kV OHTL the following policies shall be applied: (i) OP 4.01: Environmental Assessment, (ii) OP 4.04: Natural Habitats, (iii) OP 4.36: Forests, (iv) OP 4.11: Physical Cultural Resources and (v) OP 4.12: Involuntary Resettlement.

Description of Project's WB safeguards triggered:

OP 4.01 ENVIRONMENTAL ASSESSMENT

The purpose of OP 4.01 is to ensure that projects funded by the WB are environmentally feasible and viable and that the decision making is improved through appropriate analysis of actions and their probable environmental impacts (OP 4.01, par. 1).

This policy is triggered if a project is likely to have potential (negative) environmental risks and impacts in its zone of influence.

OP 4.01 covers:

- impacts on the physical environment (air, water and land);
- life environment, health and safety of populations;
- cultural and physical resources;
- environmental concerns at the transboundary and world levels.

Social aspects (involuntary resettlement, indigenous populations) as well as natural habitats, pest control, forestry and safety of dams are addressed by separate policies with their own requirements and procedures.

The WB undertakes environmental screening to determine the appropriate extent and type of environmental assessment to be conducted. It classifies the proposed projects into categories, depending on the type, location, sensitivity, scale of the projects and the nature and magnitude of their potential environmental impacts.

This project has been classified as a category A project. When considered as category A, projects have potential adverse environmental impacts that could be significant on human populations or on environmentally important areas. These impacts may affect an area broader than the sites or facilities subject to physical works. The environmental assessment will examine the project's potential negative and positive environmental impacts and recommend any measures needed to prevent, minimize, mitigate, or compensate any adverse impacts and improve its environmental performance.

For all Category A or B projects, project-affected groups and local NGOs have to be consulted on the project's environmental aspects and their views must be taken into account during the



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 35/207

environmental assessment process. The consultations must be initiated as early as possible. These groups should be consulted shortly after the environmental screening, before the terms of reference for the EIA are finalized and also once a draft EIS report is prepared. Consultations can also be conducted throughout the project's implementation to address related issues that affect the PAPs. For meaningful consultations, all relevant material must be provided in a timely manner prior to consultations, in a form and language that are understandable and accessible to the groups being consulted.

OP 4.04 NATURAL HABITATS

The 4.04 conservation policy's purposes are to protect natural habitats and their biodiversity and to ensure the sustainability of services and products that natural habitats supply to human societies. In principle, the WB will refuse to finance project's that may be perceived as causing significant damages in Critical Natural Habitats (CNHs).

Its objective is to circumvent the conversion or degradation of non-critical natural habitats, as much as possible. These impacts should be avoided by reconfiguring the project, even in its size or its extension, and/or by implementing acceptable mitigation measures, such as the establishment of protected areas or the strengthening of effective protection of CNHs. Should the project involve the significant conversion or degradation of natural habitats that are not considered as critical, and if there are no alternative solutions for the project and its location, and if the complete analysis clearly shows that the project's overall benefits are significantly higher than the environmental costs, then the WB can finance the project if the project includes appropriate mitigation measures.

The WB defines natural habitats as land or water zones where biological communities sheltered by ecosystems are in majority made of indigenous plant and animal species, and where human activity has not fundamentally modified its zone's main ecological functions.


CNHs are defined as:

- existing protected areas and areas officially proposed by governments to be classified amongst 'protected areas' e.g. reserves that meet the criteria of the International Union for Conservation of Nature (IUCN) classifications;
- areas recognized as protected by traditional local communities;
- sites maintaining vital conditions for the viability of such protected areas.

OP 4.36 FORESTS

The OP 4.36 is about forest protection. The major objectives of the policy are (i) sustainable management of forests, (ii) conservation of wet forest zones and (iii) communities' rights respected in their traditional use of forest zones in a sustainable manner.

The WB does not finance projects that would involve significant conversion or degradation of critical sections of forests or essential (critical) natural habitats attached to them.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 36/207
---	--	---------------------

Should the project involve the significant conversion or degradation of natural forests or associated natural habitats that are not considered as critical, and if there are no alternative solutions for the project and its location, and if the complete analysis clearly shows that the project's overall benefits are significantly higher than the environmental costs, then the WB can finance the project on condition that it includes appropriate mitigation measures. OP 4.36 is triggered by the project as some forest habitats are located along the projected transmission line route.

OP/BP 4.11 PHYSICAL CULTURAL RESOURCES (PCR)

This policy assists in preserving physical cultural resources (PCRs) and helps reduce chances of their destruction and/or damage. The policy considers PCRs to be resources of archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic or other cultural significance.

According to this policy, an investigation and inventory of PCRs likely to be affected by the project have to be conducted. The investigation should document the significance of such PCRs, and assess the nature and extent of potential impacts on them. Since many cultural resources are generally not well documented or protected by law, public consultations are an important mean of identifying PCRs.

Such consultations include meetings with project-affected groups, relevant government and non-governmental organizations.

If PCRs are found during an inventory, a management plan must be prepared. This management plan must include measures to avoid or mitigate any adverse impacts on PCRs, provisions for managing chance findings, any necessary measures for strengthening institutional capacity for the management of PCRs and monitoring systems to track the progress of these activities.


Finally, whether or not a PCR is found at the inventory phase, provisions for managing chance finds must be implemented to ensure that PCRs that may be discovered be properly handled.

OP. 4.12 INVOLUNTARY RESETTLEMENT

The main objectives of the WB Resettlement Policy (OP 4.12) are to:

- avoid or minimize involuntary resettlement, whenever feasible;
- develop resettlement activities as sustainable development programs, providing sufficient investment resources to enable the displaced persons' share in project benefits;
- meaningfully consult displaced persons and give them opportunities to participate in the planning and implementation of the resettlement programs;
- assist displaced persons in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of the project's implementation, whichever is higher.

This policy is usually applied for projects that require international financing. Annex A (Paragraphs 17-31), describes the scope (level of detail) and the elements that a resettlement plan should include. These include objectives, potential impacts, socioeconomic studies, legal and institutional

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 37/207
---	--	---------------------

framework, eligibility, valuation and compensation of losses, resettlement measures, relocation planning, community participation, grievance management procedures, implementation schedule, costs and budgets, and monitoring and evaluation.

WB OP 4.12.(6a) requires that the resettlement plan include measures to ensure that displaced persons are (i) informed about their options and rights, (ii) consulted and offered choices among technically and economically feasible resettlement alternatives, and (iii) provided prompt and effective compensation of full resettlement costs.

WB OP 4.12 (8) requires that particular attention should be places to the needs of vulnerable groups among those displaced such as: those below the poverty line, landless, elderly, women and children, indigenous populations and ethnic minorities.

WB OP 4.12 (13a) stipulates that any displaced persons and their communities and any host communities receiving them should be provided with timely and relevant information. They also implementing and monitoring of the resettlement.

WB OP 4.12 (12a) states that payment of cash compensation for lost assets may be appropriate where livelihoods are land-based but only when the land taken for the project is a small fraction (less than 20%) of the affected asset and the residual is economically viable.

WB OP 4.12 (6b&c) state that in case of physical relocation, displaced persons should be (i) provided assistance (such as moving allowances) during relocation; and (ii) provided with residential housing, or housing sites, and, if required, agricultural sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site. In addition, displaced persons should be offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living. This development assistance comes in addition to compensation measures such as land preparation, credit facilities, training, or job opportunities.

WB OP 4.12 (13a) requires that appropriate and accessible grievance mechanisms be established to sort out any issues arising.

2.7 Provision of the Regulation regarding the protection of electrical network

In order to ensure integrity, normal operation conditions and prevention of accidents, the provisions of GD no. 514/2002 for approval the Regulation regarding the protection of electrical network shall be respected.

The following main provisions are relevant for the proposed investment:

- For OHTLs construction and operation, the land will be assigned according to the legislation;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 38/207

- Safety zones within certain distances from the outer conductors shall be established; for 400 kV OHTL, the safety zone is defined as a distance of 30 m from outer conductors, resulting a total OHTL safety corridor of 75 m;
- Minimum acceptable distances between OHTLs and buildings, constructions, land and water areas shall be established;
- Delimitation of corridor clear of trees in massive woodlands and plantations shall be defined.

The land within the OHTL safety corridor, not taken from land owners, will be used for agricultural works and other works, in strict compliance with GD no. 514/2002.

The planned works for repairing, technical maintenance and reconstruction of OHTLs crossing agricultural land will be performed with the consent of the land owners and, usually, in period when the land are free of crops or the integrity of agricultural cultures is ensured. Owners of the land crossed by the OHTLs and within the safety corridors shall be compensated for damage to crops.

In the protection zones of electrical networks, it is forbidden to carry out, without the written consent of S.E. Moldelectrica, any actions that may lead to disruption of the normal operation of electrical networks, to their damage or to accidents, namely:

- a) carrying out constructions, capital repairs, reconstructions or demolition of buildings and constructions;
- b) execution of any mining, loading-unloading, dredging, dynamiting and improvement works, planting and cutting trees and shrubs, installing dams, trellises for vineyards and orchards;
- c) the passage of cars and mechanisms, with or without load, having a height of more than 4.5 m from the road surface;
- d) planting green areas with perennial plantations;
- e) location of car fueling stations and other fuel and lubricant stores;
- f) throwing, supporting or tying foreign objects to electric poles or conductors, climbing poles, blocking access to them, throwing snow from roofs onto conductors;
- g) the formation of various garbage accumulation sites;
- h) storing fodder, fertilizers, straw, wood and other materials, lighting the fire;
- i) arranging sports fields, stadiums, fairs, stations for public transport, parking lots for all types of machines and mechanisms, organizing various events involving a large number of people, who are not employed in the execution of authorized works in the established manner;
- j) launching kites, sports models of flying machines, including guided ones;
- k) the stationing of all means of transport, with the exception of railway transport (the OHTL protection zones with voltages over 330 kV);
- l) arrangement of field cantonments and barns;
- m) the demolition or reconstruction of buildings, bridges, tunnels, railways, roads and other constructions in the places where the overhead power lines are crossed or where the entrance units and distribution facilities are located without the prior exchange of these lines and facilities on behalf of the construction's beneficiaries, in agreement with S.E. Moldelectrica;
- n) theft of materials, devices, equipment and elements of electrical networks;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 39/207

- o) the use of mobile suppression installations (in the protection zones of 6-750 kV electricity transmission lines);
- p) finding foreign persons on the territory or in the premises of electrical network constructions, opening doors and windows of electrical network installations, switching and connecting electrical networks;
- q) liquidation or blocking of access paths to the objectives of the electrical networks;
- r) shooting birds on the OHTL poles or conductors;
- s) fishing and catching other aquatic creatures, extracting aquatic plants with underwater tools, organizing watering fords, breaking and collecting ice in the protection zones of underwater power lines;
- t) carrying out earthworks in the underground the cable electrical cable appropriation at a depth of over 0.3 m, and on plowed lands - at a depth of 0.45 m, leveling the soil with bulldozers and excavators;
- u) execution of works with percussion mechanisms, throwing weights of more than 5 tons, evacuation of caustic and corrosive substances, as well as fuels and lubricants;
- v) dropping the anchor, passing with anchors, chains, probes, nets and trawls thrown in the areas of protection of underwater cable lines with electricity transport.

Along the OHTL that crosses the wooded massifs and green areas, strips cleared of trees will be drawn, in accordance with the "Rules for the arrangement of electrical installations". The deforestation of the plots will be coordinated with the S.E. "Moldsilva" and its subsidiaries, on whose balance sheet these plantations are located and, in the manner established by law and with permission issued by the Environmental Agency.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

CHAPTER 3: THE DESCRIPTION OF THE 330/110/35KV CHISINAU SUBSTATION

3.1 General data about the Chisinau Substation

3.1.1 Location of the Chisinau Substation

The Chisinau Substation is located in the commune Bacioi; the land plot was allotted based on the Mayorality Decision no. 112-p of February 20, 1964 and the plot has the status „special use” with area of 7.5582 hectares.

The purpose of allotted plot is nonagricultural. The industrial area was registered in the Cadastral Register with no. 157 on November 29, 2001. The land under the built infrastructure is the property of the mayorality of commune Bacioi and the built infrastructure is the property of the State Enterprise Moldelectrica.

The plan of the plot with distances has the cadastral number 5514101601, is presented below.

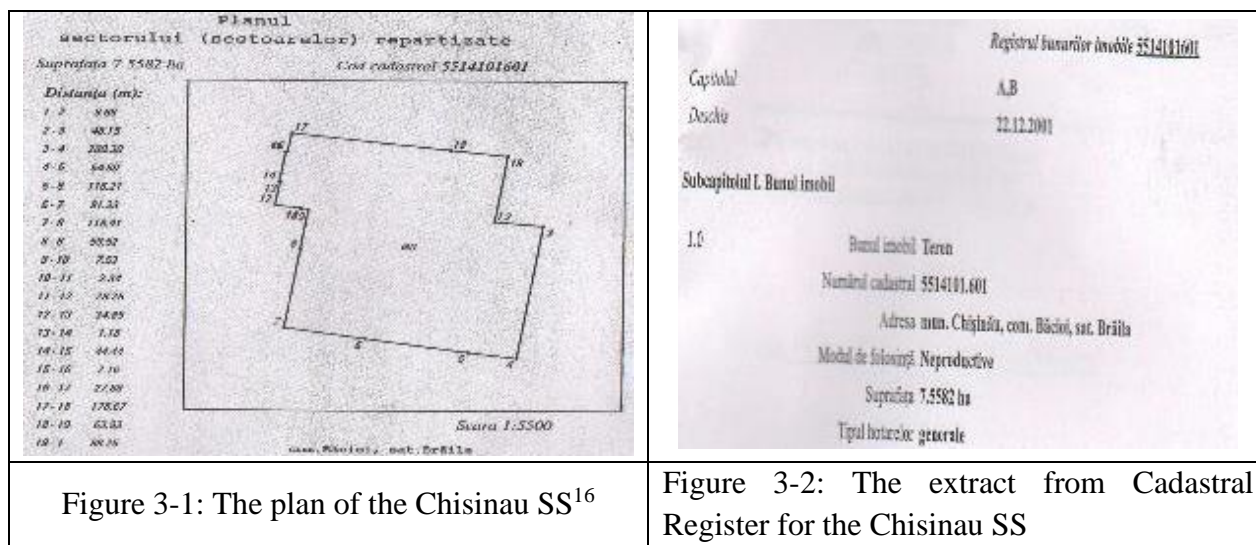


Figure 3-1: The plan of the Chisinau SS¹⁶

Figure 3-2: The extract from Cadastral Register for the Chisinau SS

The Chisinau Substation is located in the outside of the build-up area of the village Braila which is in the administration of the Commune Bacioi.

The Chisinau Substation has the road access from the local road L 458. The distance from the gate of the Chisinau SS till the first row of the house from the village Braila is more than 200 m. Around the fence of the Chisinau SS there is a protection zone which shall be kept free of trees and bushes.

¹⁶ Source: Titlul de autentificare a dreptului de detinator de teren, nr. 5514101601 issued by the IP Agentia Servicii Publice



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 41/207

The 330/110/35 kV Chişinău Substation is situated at 6.0 km in the south part of Chişinău city. The distance is measured from the substation to the outskirts of the city (last building or yard), and having the following coordinates: Latitude - 46.917821 and Longitude - 28.850157.

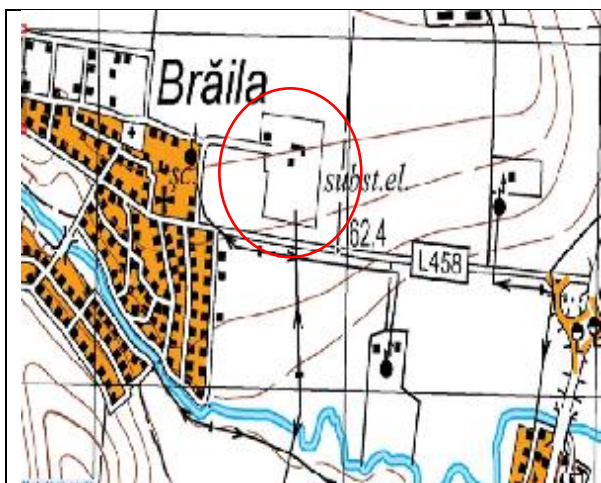


Fig. 3-3: Chisinau SS located in the outside of the build-up area of the v. Braila



Fig. 3-4: Location for planned activity for upgrading the Chisinau SS

The planned activity for upgrading of the 330 kV Chisinau substation shall be done inside of the existent substation, the territory of the industrial area is properly fenced with gate. On the night, the territory of the Chisinau SS is illuminated and is protected by the State Security Department as being an industrial safety object.



Fig. 3-5: Agricultural plots around the Chisinau SS¹⁷

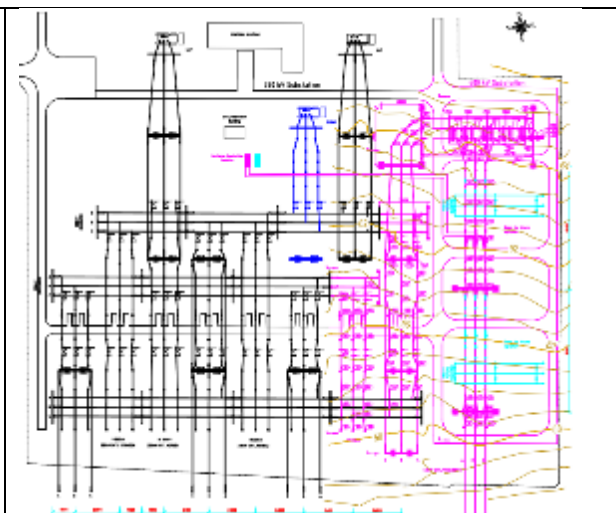


Fig. 3-6: The 400 kV equipment (pink) in the Chisinau SS¹⁸

¹⁷ Source: http://geoportal.md/ro/default/map#lat=197804.509423&lon=234753.710657&zoom=6&layers=66_base19_base20

¹⁸ Electrical Layout Plan provided by the Contractor Association Siemens Energy SRL



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 42/207

There are agricultural plots around the Chisinau SS but owners of the plots will not be affected by the project implementation.

The planned activity for upgrading the Chisinau SS is planned to be performed inside of the Chisinau SS and on this plot, there are present bushes and sapling trees grown from seeds. Before starting the execution of the civil construction works, Contractor has to remove (cut) bushes and other vegetation based on recommendation issued by the Environmental Agency for cutting sapling trees and bushes. According to the Environmental Agency decision for cutting bushes and sapling trees no an authorization and based on HG no. 514/2002 Regulation for protection of the electrical network, the Chisinau SS shall be free of any trees and bushes in order to ensure electrical security.



Fig. 3-7: Removed bushes under the 35 kV inside of the Chisinau SS



Fig. 3-8: The Chisinau SS with vegetation

In order to ensure integrity¹⁹, create normal operating conditions for electrical networks and prevent accidents, special lands will be allocated, protection zones will be established, minimum acceptable distances from electrical networks to buildings, constructions, land and water surfaces, will be delimit the cleared sheets of trees in the forest massifs and plantations.

3.1.2 Sanitary zone of the Chisinau Substation

The sanitary protection zone is a special territory, with a strict usage regime, which is established in the perimeter of the Chisinau Substation, which represent sources of risks for the health of the population. The Chisinau Substation territory is fenced with concrete blocks and with a metal secured gate.

¹⁹ Art. 3, GD no. 514/2002 - https://www.legis.md/cautare/getResults?doc_id=6186&lang=ro



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 43/207



Fig. 3-9: The view of the Chisinau SS and with fence around

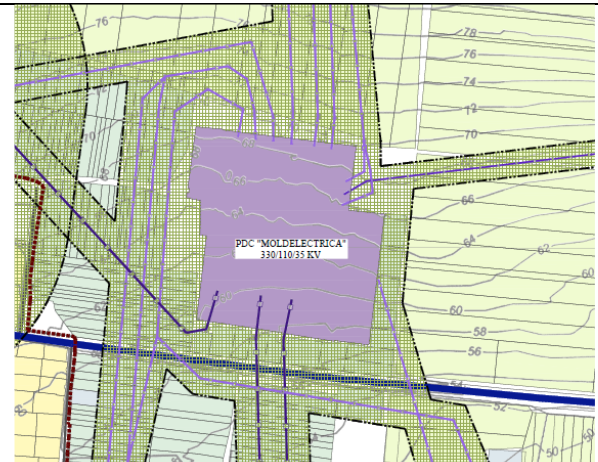


Fig. 3-10: Electrical network of the Chisinau SS and OHTL of 330kV, 110 kV and 35 kV

According to the Government Decision no. 514/2002 Regulation regarding the protection of electrical networks, electrical network represent all electrical installations for the transport and distribution of electrical energy, composed of electrical stations, distribution installations, overhead electrical lines and electrical cable lines operating in a certain territory and the area along the Chisinau SS with OHTLs, consisting of the land and the airspace, limited by the vertical planes, away from both sides of the line from the marginal conductors without deviations, at a distance of 30 m.

Additionally, lands located in the power grid protection zones, will not be taken from the landowners, but will be used by them for agricultural works and other works in strict compliance with provision of the GD no. 514/2002. The owners of the agricultural lands, on whose territory the OHTLs and substations are drawn, are obliged to take the necessary measures to ensure the integrity of these lines.

3.1.3 Access road to the Chisinau SS

The Chisinau SS is located at the outskirts of the village Braila and has access to the national road G 72. The national road G 71 connects the district Ialoveni, Bacioi, Singera and R2 via intersecting the express road M3.

The express road M3 is a road in the central-southern part of the Republic of Moldova, with a length of 217 km. The road connects the capital Chisinau via Cimişlia and Vulcăneşti to the border with Romania through Giurgiuleşti and M3 is part of the European road E584.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 44/207



Fig. 3-9: Location of the Chisinau SS at the intersection of roads M3 and G 71 (national)²⁰



Fig. 3-10: The access road to the existing Chisinau SS

3.1.4 Administrative infrastructure

At the moment, the following buildings are located on the territory of the station: (i) the operational command point equipped with offices for staff, (ii) a repair shop, (iii) the building of the former oil farm, (iv) the building with the pumps of the fire-fighting system, (v) the building with the valves of the fire-fighting system and (vi) the building of the former compressor room.

3.1.5 Potable water infrastructure

Potable and technical water, including that required for the fire-fighting system, is provided with the help of an artesian well.

3.1.6 Sewage system

The Chisinau Substation is equipped with a household sewage system to which the WC and bathroom from the building of the operating command point and the repair workshop are connected. The Chisinau Substation is not connected to the centralized domestic sewage system and is not equipped with a domestic wastewater treatment system.

Collected household waste water is stored in a special tank inside of the Chisinau Substation and periodically is discharged by authorized economic agents based on the contract for the provision of the respective services.

3.1.7 Waste management

The solid domestic waste is collected in specialized containers.

²⁰ Source: Interactive map from ASD - <https://www.asd.md/harta-interactiva/>

Evacuation of the solid domestic wastes to the storage place is ensured by the specialized economic operator based on the contract for the provision of the respective services.

3.1.8 Workforce at the Chisinau Substation

There are 18 people employed at SE Chisinau 330/110/35 kV, of which: women - 1 person, men - 17 people.

Table 3-1: Number of personnel present at the Chisinau Substation

No.	Types of	Number of men and women	Percent, %
1	Number of men	17	94.44
2	Number of women	1	5.56
3	Total employees	18	100

Working program: (i) for operative staff 24 hours a day in two shifts of 12 hours each and (ii) for the rest of the staff 5 working days a week from 8.00 to 17.00.

3.1.9 Means of transport

The Chisinau Substation is equipped with a vehicle UAZ type 3909 property of SE Moldelectrica.

3.1.10 Security

The Chisinau Substation is equipped with a video surveillance system and is permanently monitored by the substation personnel present in the station 24/24. Visitors shall receive a health and safety training at the SE Moldelectrica training centre and they are conducted inside of the Chisinau Substation by a responsible person.

3.1.11 Firefighting Equipment

The fire-fighting system of the Chisinau Substation consists of the following components:

- automated fire extinguishing system with water at autotransformers;
- two fire-fighting water tanks with a total volume of 550 m³;
- the automatic fire signalling system in the operational command point building;
- fire extinguishers in a number of 68 pieces;
- fire extinguishing stations according to the normative documents in force located on the territory of the station.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 46/207

3.1.12 First Aid facility

The Chisinau Substation does not have a medical office. The provision of medical first aid is ensured by equipping workplaces with medical kits and periodic training of the staff on the rules and methods of providing medical first aid according to the normative documents in force.

3.2 Description of the Chisinau Substation's Equipment

3.2.1 General data of the Chisinau Substation

Chisinau substation includes circuits at voltage levels of 330 kV, 110 kV and 35 kV²¹. The 330 kV Chisinau substation has a diagram with two busbars, to which the following circuits are connected:

- 3-line bays (Straseni, MGRES 1 and MGRES 2),
- 2 autotransformer bays of 200 MVA, 330/110/35 kV (1AT - 2AT), and
- 1 auto-transformer bay of 125 MVA, 330/110/35 kV (3AT).

The diagram is with 2 circuit-breakers on the circuit for the OHL bay, and the autotransformer bays are connected to the bars through disconnectors.

The bay pertaining to the autotransformer 3AT is decommissioned and will be dismantled.

The busbars are sized for 2500 A and 40kA/1s.

3.2.2 Substation Equipment

During 2007-2008, most of the primary equipment of the bays in 330 kV Substation was replaced with new high-performance equipment, namely:

- GL-315 tree-pole circuit-breakers, with spring operating mechanism;
- S2DAT disconnectors, with horizontal opening, with one or two earthing switches;
- AT-362 and TΦY-330 current transformers;
- HKΦ-330 voltage transformers.

3.3 Contractors Facilities

3.3.1 Construction Activities

The Site installation to be provided by the contractor shall include the following services/works:

- Temporary contractor's office, social room, sanitary rooms and storage;
- Clearing, grubbing, stripping, excavation, levelling, draining, dumping of excavated materials etc. for the areas required for the Site installation as necessary;
- Distribution of electric power and distribution to each individual consumer including maintenance;
- Supply and distribution of drinking water;

²¹ Source: Technical Specification for upgrading the 330 kV Chisinau Substation



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 47/207

- Sewer system and sewage disposal;
- Execution of all mechanical and electrical installation, foundation work for the equipment, machinery, storage and site facilities, etc.;
- Temporary timbering for working spaces, etc.;
- Movable fire-fighting equipment;
- Waste disposal.

3.3.2 Operation


3.3.2.1 Operation by Contractor

The Contractor shall prepare and submit for MEPIU's approval the Contractor's Environmental and Social Management Plans and Contractor's OHS Plan within 30 days of the starting the construction works.

The Contractor shall develop its own Contractor's ESMP by taking into consideration the requirements established in the Site Specific ESIA/ESMP and it is required that a number of more detailed E&S management plans and programs to be prepared by contractor before starting the construction activities on site, including:

- Emergency Preparedness and Response Plan;
- Traffic Management Plan;
- Land Clearing, Erosion Control, and Site Restoration 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.

Additionally, the Contractor shall develop its own Contractor's OHS Plan by taking into consideration the requirements established in the Site Specific OHS Plan and it is required that a Human Resources Plan and Social Management Plan shall be developed by Contractor before string the construction activities on sites.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 48/207
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3.3.2.2 Operation by the Beneficiary SE Moldelectrica

The Beneficiary shall keep under control identified risks for the new 400 kV OHTL in the present document and it is recommended to implement an environmental and social managements system in order to comply with the Global International Industrial Practices.

3.3.3 Decommissioning

3.3.3.1 Decommissioning by Contractor

As soon as the work covered by these specifications is completed and before the Contract's final liquidation, the Contractor with prior approval of the Engineer shall remove from the Employer's property all buildings, installations and temporary facilities erected aboveground. The Contractor shall fill with earth all basements and underground areas, leaving the terrain completely clean and with a good appearance to a condition similar to adjacent natural areas, if necessary, by means of the spreading of topsoil.

The Contractor shall also treat the excavations executed for his own convenience, such as temporary roads, in a way acceptable to the Engineer. If the Contractor refuses to remove the construction installations or if the operation is not made as previously specified within 2 months from completion of the work, the constructions and other installations may be removed by the Employer and the removal costs shall be deducted from the Contractor's final payment.

3.3.3.1 Decommissioning by the Beneficiary SE Moldelectrica

During the decommissioning stage, the operator shall comply with applicable law of Republic of Moldova regarding the demolition process and shall receive Demolition Authorization for the Chisinau SS. Identified the environmental and social mitigation measures in the present document shall be take into consideration for development of an ESMP as well as a Technical Design for demolition process.

3.4 Analysis of Alternatives for Chisinau Substation

The upgrading of the 330 kV Chisinau Substation by installing the new 400 kV equipment shall be done inside of the Chisinau Substation.

3.6 Implementation Schedule

The Contractor shall start the construction works based on Work Schedule²² coordinated by the Construction Supervision Engineer and approved by MEPIU.

²² The Contractor has not provide the Work Schedule yet



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 49/207

CHAPTER 4: SOCIO-ECONOMIC BASELINE²³

4.1 Administrative Setup

The Băcioi Commune is a locality in the Chisinau Municipality located at latitude 46.9122, longitude 28.8838 and altitude 50 meters above sea level. The direct distance to the city of Chisinau is 10 km. The commune borders with villages Revaca and Sângera to the east, the city of Chisinau to the northwest, the city of Ialoveni to the west and the villages of Zâmbreni, Răzeni and Tipala to the south.

The village has an area of about 4.04 square kilometers, with a perimeter of 12.58 km. The Commune Băcioi is located at a distance of 12 km from the city of Chisinau. The Commune Băcioi consists of the following villages Frumușica, Straisteni and Brăila.

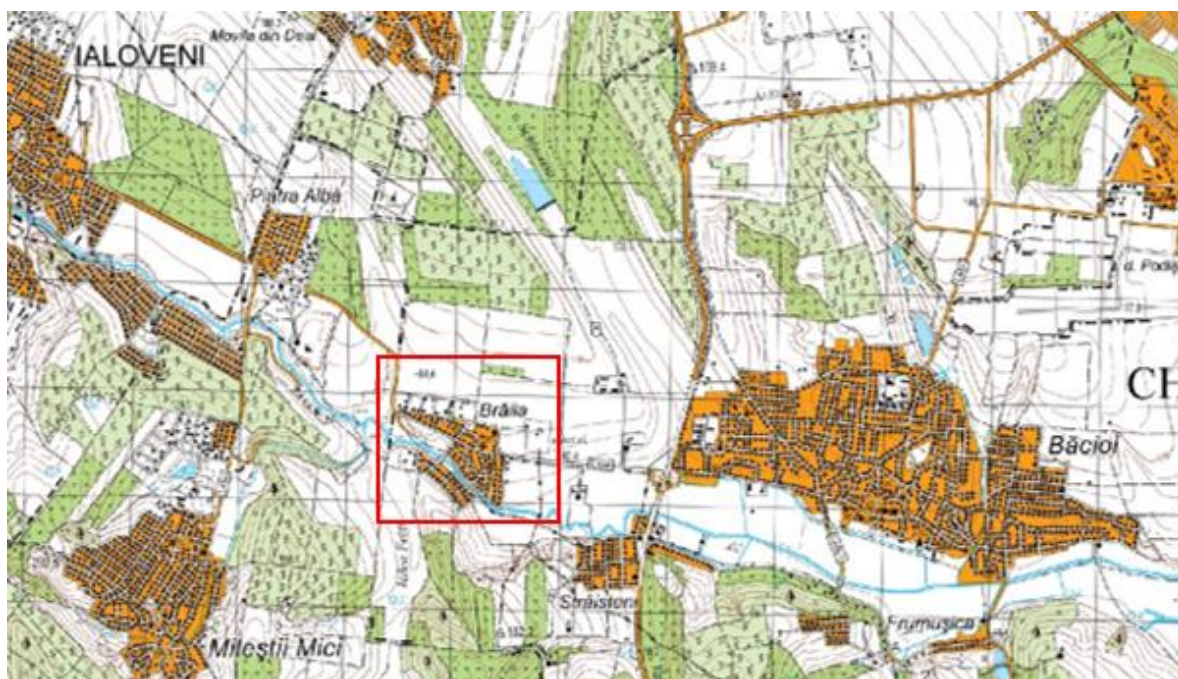


Figure 4-1: Location of the village Brăila within commune Băcioi²⁴

The village Brăila is located on the southwestern part of the village Băcioi, on the left bank of Ișnovăț river, on both sides of the Ialoveni - Sîngerei road (G71). The village is located 15 km southeast of the Revaca railway station in Chisinau. The village has an area of approximately 0.23 km², with a perimeter of 1.97 km.

²³ Source: Data are provided in the Social Report developed by the Consultant for providing consulting services for development of Site-Specific ESIA/ESMP for the construction of a new 400kV Vulcanesti-Chisinau Single-Circuit Overhead Transmission Line and upgrading of the 330/110/35 kV Chisinau Substation

²⁴ Source: <http://geportal.md/ro/default/map#lat=198704.366114&lon=235520.491204&zoom=5&layers=base13>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 50/207

4.2 Population and Demography

The village Băcioi is a locality in Chisinau Municipality located at latitude 46.9122 longitude 28.8838 and altitude of 50 meters above the sea level. This locality is under the administration of Chisinau Municipality. Direct distance to Chisinau is 10 km.

According to existing data, the population of the village of Braila is approx. one thousand inhabitants. Statistics mention 940 and the municipality mentions approx. 1 thousand inhabitants. In the locality there is a permanent migration, but which is specific to the suburbs - of permanent growth, in contradiction with general country tendency of reducing of population number.

The population of the commune Bacioi²⁵ is 10828 inhabitants in the commune consists of 4 villages including Braila.

Table 4-1: Population in commune Bacioi²⁶, by sex:

Locality / sex	Total	Male	Percentages, %	Female	Percentages, %
Total population	10175	4955	48.68	5220	51.32
Working population	7391	3598	35.36	3793	37.28
Pensioners	743	362	3.56	381	3.74

Table 4-2: The Bacioi Population, by age group

Age categories, years	Total	Under 15	15-29	30-49	50-64	65-84	85 and older
Total number of inhabitants	10175	2041	2467	2970	1954	698	45
Percentage, %	100	20.06	24.24	29.19	19.20	6.86	0.44

The working population: men and women (18 - 65 years) is 7391. Population over working age (pensioners), of which 64-85 years and older - 743.

4.3 Occupation, Income and Expenditure


The working population of Bacioi commune and Braila village in particular is mostly employed in the city of Chisinau and the Ialoveni town. Most of them commute daily to work or study. Another part of the population is employed at local institutions and companies or is engaged in agriculture.

An estimated 15% of the population is working abroad and another 10% are retired.

The National Bureau of Statistics informs that, based on the Household Budget Survey, in 2021 monthly disposable incomes of population summed up in average per person 3510,1 lei, increasing

²⁵ Source: www.bacioi.md.

²⁶ <https://recensamint.statistica.md/en/dissemination/person/0675170749aa61a7db2338194d5bc87d>

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 51/207
---	--	---------------------

by 13,4% compared to the previous year. In real terms (adjusted to the consumer price index) population incomes increased by 7,8%.

Monthly population expenditures in 2021 in average per person constituted 3039,5 lei, which is 8,9% more compared to the level of the previous year. In real terms (adjusted to the consumer price index) the population spent increased by 3,6% compared to 2020.

Depending on the place of residence, it is found that the incomes of the population from the urban environment were on average 1324.0 lei or 1.4 times higher compared to the incomes of the population from the rural environment. The main sources of income for the population in the urban environment were salary activity, which ensured the income of the population in proportion to 62.1% and social benefits – 16.0%. For households in rural areas, as in urban areas, the most important source of income is salary activity - 40.0% of total income, but its share is 22.1 percentage points lower than in urban areas. At the same time, the incomes obtained from the individual agricultural activity ensured 15.3% of the total available incomes. Rural households are more dependent on transfers from outside the country compared to urban ones, the share of these incomes being 15.4% in rural areas and 9.5% respectively in the case of the urban population. Apart from this, a higher contribution of social benefits is also characteristic for the rural population - 20.9% of total income, compared to 16.0% in the urban environment. The average amount of income is determined by several factors, an important one being the composition of the household. Thus, the average income of a person decreases as the number of members in the household increases. Households made up of a single person had 1.9 times higher incomes compared to those made up of 5 or more people. In absolute values, these extremes recorded, on average, values of 4235.8 lei per person for households consisting of one person and 2185.2 lei per person for households with 5 or more people. At the same time, the share of income from salary activity is maximum in the case of households made up of 3-4 people. Regarding households with children, salary income has a lower weight in the case of those with 3 and more children.

4.4 Access to Infrastructure faculties

The lands on which the Chisinau Substation (7.5582 ha) is located are in the property of the state and other lands are not necessary to be procured. All works, including those of construction and arrangement, will be located on the existing and fenced territory of the station.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 52/207

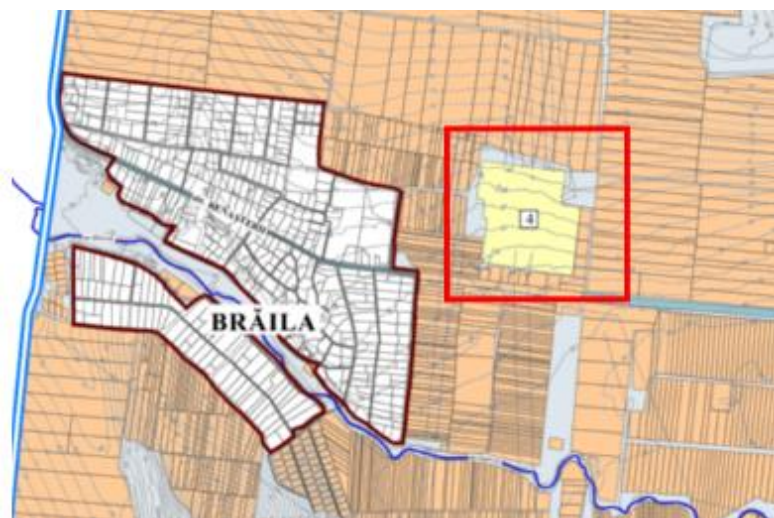


Figure 4-2: The location of the Chisinau Substation on the territory of Bacioi Commune

The lands adjacent to the station are state owned or private lands generally used in agriculture. OHTL electric towers of different sizes and constructions are located on these lands.

4.5 Gender and Social Divisions (Status of Women and their role in local development)

Rural women are key agents for development. They play a catalytic role towards achievement of transformational economic, environmental and social changes required for sustainable development. But limited access to credit, health care and education are among the many challenges they face. These are further aggravated by the global food and economic crises and climate change. Empowering them is essential, not only for the well-being of individuals, families and rural communities, but also for overall economic productivity, given women's large presence in the agricultural workforce worldwide.

In 2021, Moldova is ranked 28th out of 156 countries, making a small improvement in the last two years in terms of the Global Gender Gap. During the past 15 years, the relative modification for all 4 analysed indicators has a positive value; i.e. for the economy participation and opportunity at 0.051, for education attainment at 0.002, for health and survival at null and for political empowerment at 0.169.

With the Gender Inequality Index²⁷ (a composite measure reflecting inequality in achievement between women and men in three dimensions: reproductive health, empowerment and labour market) Moldova was ranked 46th in the world in 2019, due to the following achievements:

- Maternal mortality ratio (SDG 3.1) – 19 deaths per 100,000 live births;
- Adolescent birth rate (SDG 3.7) – 22,4 births per 1,000 women aged 15–19;
- Share of seats in parliament – 25,7% held by women;

²⁷ Country Gender Profile: https://www.eeas.europa.eu/sites/default/files/country_gender_profile.pdf



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 53/207


- Population with at least some secondary education (SDG 4.4): Female – 96,6% aged 25 and older, Male – 98,1% aged 25 and older;
- Labour force participation rate: Female – 40,5% ages 15 and older, Male – 46% ages 15 and older.

The ability of countries to provide a high level of well-being for their citizens is assessed in the Global Competitiveness Reports, which ranks countries based on the Global Competitiveness Index (GCI). During the last three years, Moldova has been ranked 86th - 88th scoring from 54,6 to 56,7 points for the GCI (100 points being the best value).

As to the poverty specific gender-sensitive indicators, according to the UN Women statistical data, the proportion of population living below the national poverty line is at 9,6%. 100% of the population (both women and men) with severe disabilities receive disability cash benefits and 100% of mothers with newborns receive maternity cash benefits. For the population above statutory pensionable age, there are 100% of men and 46,1% of women that receive a pension, the average proportion per whole country being equal to 75,2%. Only 10,5% of unemployed persons receive unemployment cash benefits, with no available sex disaggregated data. In 2019, the level of poverty among women was 25.6%, and among men 24.8%. At the same time, the poverty rate among female-headed households is higher than in male-headed households. Thus, the level of poverty in female-headed households was 26.6%, or 2.0 pp more than in male-headed households. Women's poverty, economic opportunities for women related to employment and income generation opportunities are areas of interest in promoting equality between women and men. In the case of women living in rural areas in Moldova, the disadvantages in this respect are especially visible. In general, in the Republic of Moldova, poverty is more pronounced in rural, than in urban areas, and the absolute poverty rate among women is 15.6% in rural areas in comparison to only 4.8% among women from urban areas. In recent years a steady reduction of poverty has been observed and, along with its reduction, a reduction of the gap between rates of poverty in villages and cities can be observed. For women, the difference between the poverty rates by residence areas in 2010 was 18.3 percentage points, dropping to 10.8 percentage points in 2014.

4.6 Poverty profile including disadvantaged and vulnerable people

The Chisinau Substation is located in the industrial area of the commune Bacioi and planned activity for upgrading the Chisinau SS will take place inside of the substation. Upgrade activity will not affect the population from the village Braila, the nearest to the substation and other people from Bacioi Commune. The upgrading the Chisinau Substation will contribute to the improvement of the people life by connecting Republic of Moldova through the new OHTL 400 kV to the EU electricity market.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 54/207
---	--	---------------------

Currently, the draft document: "General Urban Plan²⁸ (PUG) of Băcioi commune - villages: Bacioi, Brăila, Străisteni and Frumușica", which is subject to public consultation, is currently under review.

The commune Bacioi does not have a strategic document for social development but the following social organization are created and activate in the social field:

- The Bacioi Culture and Youth Center²⁹, created by the Bacioi City Hall Decision of September 14, 2022, and aims to organize the cultural life of the Bacioi commune, identify and recruit young talents, involve young people in the cultural activities that will take place in the locality, and organize some quality cultural services.
- The center for young people from Băcioi commune - BACIS³⁰ with the aim of organizing integrated development and education programs among young people from Băcioi commune.
- For public information, the commune Bacioi has a Newspaper³¹ („Ziarul de Bacioi”).

4.7 Land ownership, livelihoods of people

On the agricultural lands around the station, there are many electric pylons from where the electric overhead lines start in all directions.



Fig. 4-3: Agriculture plots around the Chisinau SS



Fig. 4-4: Existing field road near the Chisinau SS

The cadastral number of the Braila village is 5514103 and possible affected temporary land plots are presented in the table below. The Contractor shall provide the equipment inside of the substation by passing through the land plot pass one time and this process is not subject for resettlement (expropriation).

No.	Land plot number	Cadastral numbers	Owners
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²⁸ General Urban Plan of the com. Bacioi: https://bacioi.md/wp-content/uploads/2020/01/83833607_1438060239688072_3292422230037757952_o.jpg

²⁹ The Centre for Culture and Youth in the com. Bacioi: <https://bacioi.md/2023/06/30/concert-exceptional-la-centrul-de-cultura-si-tineret-bacioi/>

³⁰ BACIS Centre from com. Bacioi: <https://www.facebook.com/baciscentru/>

³¹ The Bacioi newspaper "Ziarul de Bacioi" site: Ziarul_3.indd (bacioi.md)



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 55/207

1	Agricultural land	5514103.1177	To be identified by the State Planning Institute for Land Management (IPOT) based on approved DD at the request of the Contractor
2	Agricultural land	5514103.430	
3	Agricultural land	5514103.431	
4	Agricultural land	5514103.432	
5	Agricultural land	5514103.433	
6	Agricultural land	5514103.434	

The Contractor has to provide equipment inside the Chisinau Substation by using temporary existing land road and removing the Chisinau Substation fence. The fertile black soil shall be protected by the Contractor's equipment by covering black soil with special tiles or other devices and finally reinstate agricultural land or ploughing it as it was initially.

To the west, the L458 local road passes 50 m from the substation fence, and to the south, the M3 magistral road about 1.1 km far.

Also, in the area of 1 km is situated a farm area, school, church, greenhouses, villages shops store etc. A new kindergarten is in the process of construction.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 56/207

CHAPTER 5: ENVIRONMENTAL BASELINE

5.1 Physical Environment

5.1.1 Project Influence Area

The territory of the Chisinau Substation is located on a land used as a special destination surrounded by agricultural land. The nearest locality is Braila, from the commune of Bacioi, located in the north-west. The distance from the fenced boundaries of the station to the first house is approx. 200 m, but to the eastern part of the power station where the modernization works will take place and the installation of the equipment for 400 kV is approximately 400 m, in a straight line.

On the agricultural lands around the station, there are many electric pylons from where the electric overhead lines start in all directions.

To the west, the L458 local road passes 50 m from the substation fence, and to the south, the M3 magistral road about 1.1 km far.

Also, in the area of 1 km is situated a farm area, school, church, greenhouses, villages shops stores, etc.

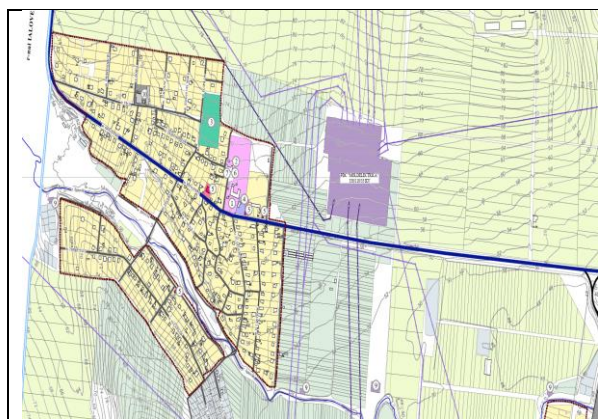


Fig. 5-1: The location of the Chisinau SS

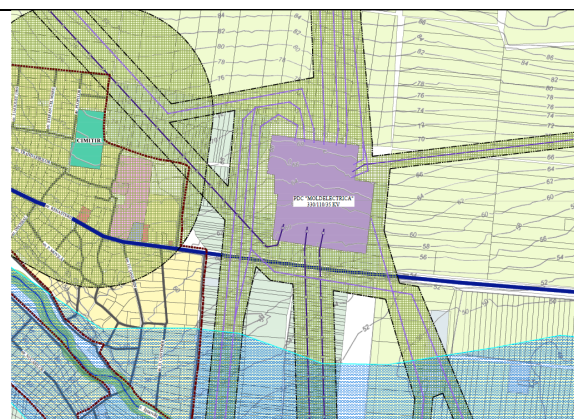


Fig. 5-2: Protection zones of the Chisinau SS and existing OHTLs

5.1.2 Physiography and Land Use

On the agricultural lands around the station, there are many electric pylons from where the electric overhead lines start in all directions.

The planned activity for upgrading the Chisinau Substation will take place inside of the fenced substation, on a free area (total area of substation is 7.56 ha) and the implementation of the planned activity will not require additional new lands to be acquired from landowners.



Fig. 5-3: Agriculture plots around the Chisinau SS

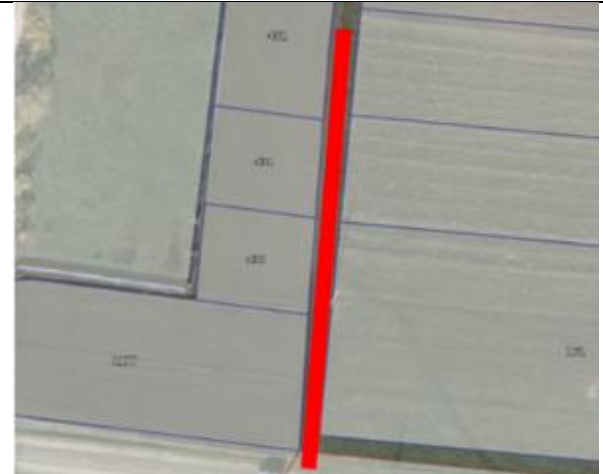


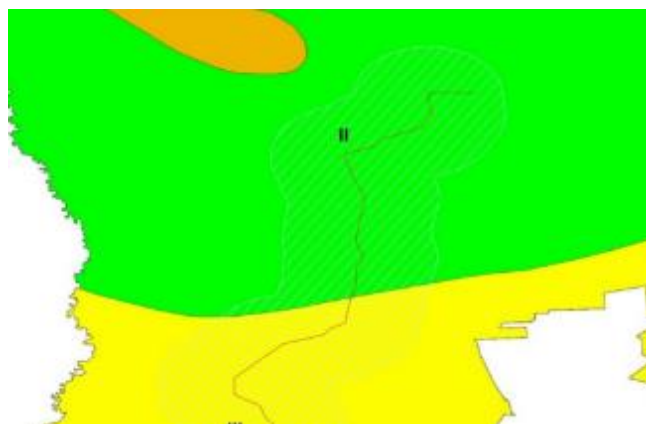
Fig. 5-4: Existing field road near the Chisinau SS

The Contractor has to provide equipment inside the Chisinau Substation by using temporary existing agricultural land road and removing the fence of the Chisinau Substation. The fertile black soil shall be protected by the Contractor's equipment by covering black soil with special tiles or other devices and finally reinstate agricultural land or ploughing it as it was initially. The Contractor's activity will disturb temporary the landowners by passing with equipment on their plots.

5.1.3 Climate

Republic of Moldova has a temperate-continental climate characterized by short winters and long warm summers. In terms of temperature and precipitation, Republic of Moldova is divided in three major agro - ecological zones: Northern, Central and Southern.

The Chisinau Substation is located within the Central zone with Pedo-climatic zone II: terraces of the Dniester, Prut, Raut, Bîc, etc. rivers and with high risks of soil erosion, salinization, desertification and flood increase.





MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 58/207

Figure 5-5: Peco-climatic zone II for Chisinau Substation³²

The Central agro-ecological zone has the following characteristics:

- Landscape: the zone is composed of hilly terrain and deep valley and covers the Codru highland;
- Temperature: annual mean temperature between 7.5 °C and 10°C;
- Precipitation: annual mean precipitation for the majority of the zones between 500 - 550 mm;
- Agriculture condition: the zone is best for different types of perennial crops, including orchards and vineyards.

The climatic features of the territory are favorable. The figures below represent the climatic characteristics (temperature, precipitation and wind speed) recorded in the municipality of Chisinau during the year 2021, according to the statistica.md³³ website.

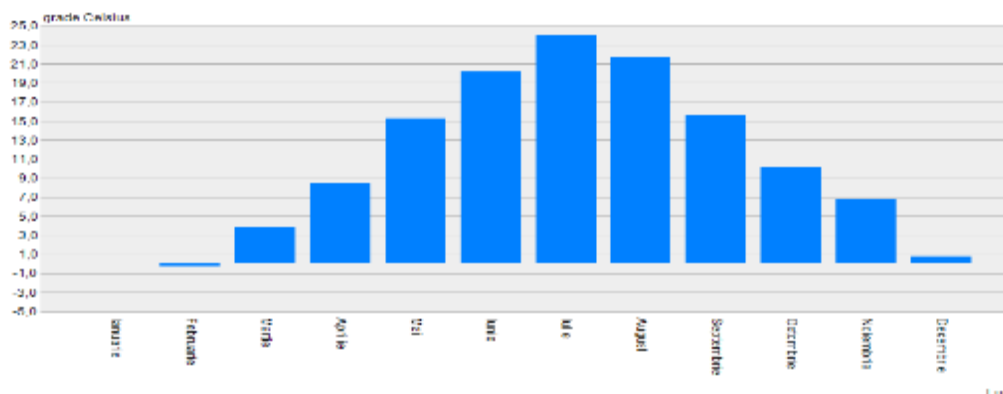
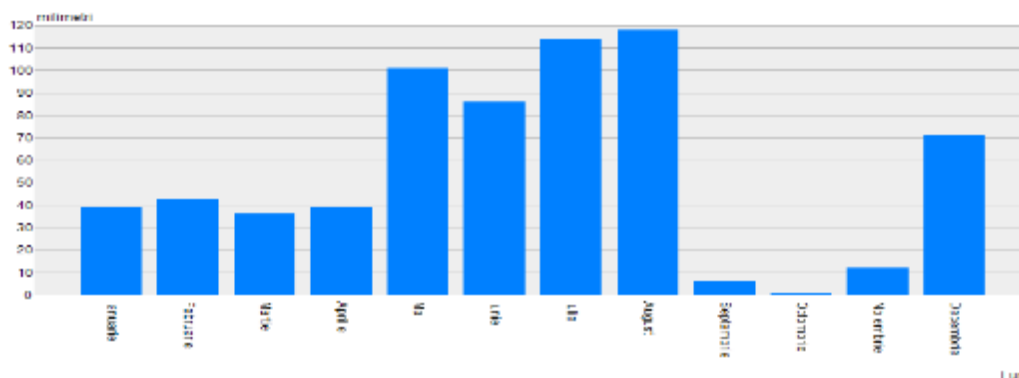


Figure 5-6: The temperature in the Municipality of Chisinau during the year 2021



³² Source: ESIA - https://moldelectrica.md/files/docs/md_ro_project/ESIA_Annexes_Interconnection_Md_Ro_EN_July%202017.pdf

³³ Source:

https://statbank.statistica.md/PxWeb/pxweb/ro/10%20Mediu%20inconjurator/10%20Mediu%20inconjurator_MED010/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 59/207

Figure 5-7: The precipitation in the Municipality of Chisinau during the year 2021

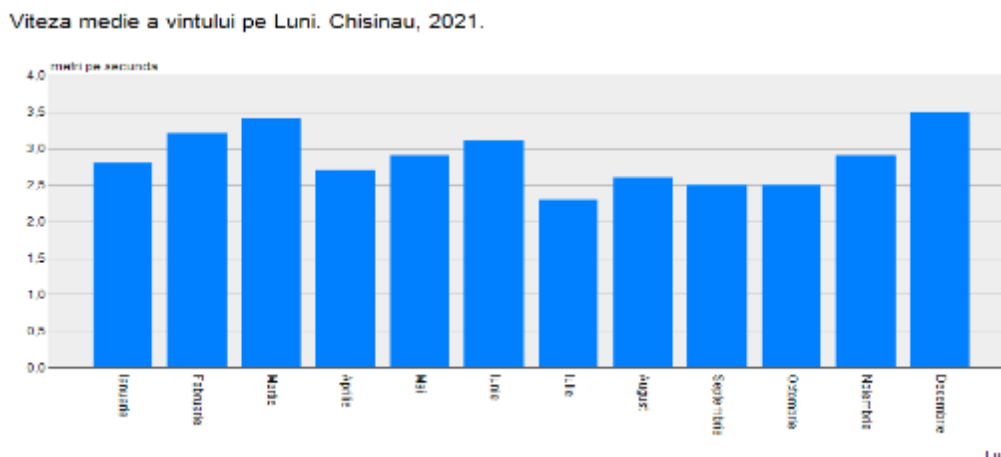


Figure 5-8: The wind speed in the Municipality of Chisinau during the year 2021

The average temperature in January in this area is about -3.5°C, in July 20°C the annual precipitation is 550 mm.

5.1.4 Hydrology

The Chisinau Substation is located in the Isnovat River Basin. The Ișnovăț River is a watercourse in the central part of the Republic of Moldova and is a right-hand tributary of the Bîc River. It is 59 km long, and the area of the basin is 371 km². Ișnovăț rises in the central part of Codri, at an altitude of 133 m, flows south and flows into the Bîc near the town of Sîngera. The river feed is mixed. In the meadow of Ișnovat, near the village Dănceni, a system of lakes was built during the Soviet period for the "Experimental Fishing Station".



Figure 5-9: The Nistru River Basin



Figure 5-10: The Isnovat River³⁴

³⁴ Source: <http://www.aplemoldovei.gov.md/pageview.php?l=ro&idc=134&id=1172>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 60/207

According to Law No. 440 of 04-27-1995, regarding the water protection zones and sheets of rivers and water basins, the riparian zone for Isnovat River is 20 m and the water protection zone is 500 m. The Chisinau Substation is out of both zones.

The territory of the Chisinau SS is far from flooding zones according to hydro local studies of the mayoralty Bacioi³⁵.

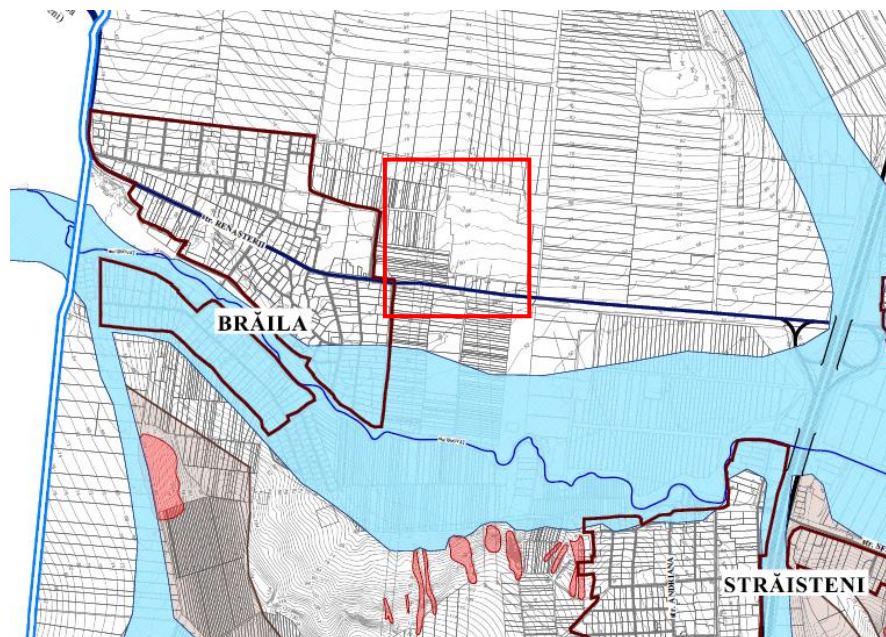


Figure 5-11: The Isnovat River Basin

During the rainy periods, when the snow melts, the water level of these main rivers rises suddenly, causing short-term floods on the neighboring agricultural lands, causing erosion on the slopes of these basins and alluvial deposits in the bottoms of the valleys. The hydrographic network in the Braila area has a socio-economic importance, their values having also ecological aspect. The groundwater level differs from 1.5 m on the bottoms of the valleys and up to 20-25 m on the plateaus, peaks, significantly influencing the productivity of the lands. The hydrographic network is under the direct influence of the rainfall regime in the respective area, being quite limited.

5.1.5 Geology

From a geomorphological point of view, the territory of the Chisinau Substation is located in the South-Eastern part of the Central Moldavian Plateau, for which the main landforms are indented water separation lines, deep valleys and landslides.

³⁵ <https://bacioi.md/wp-content/uploads/2022/08/PAT-BACIOI.pdf>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 61/207

The upper layers of the initial Tertiary (Sarmatian) rocks, as well as the diluvial deposits, were included in the pedogenesis processes and serve as parent rocks. The composition and specific properties of some parental rocks condition the direction of pedogenesis. As a result, territorially varied ecological conditions were formed. No active landslides are situated in the area or close to Chisinau SS (CSS).

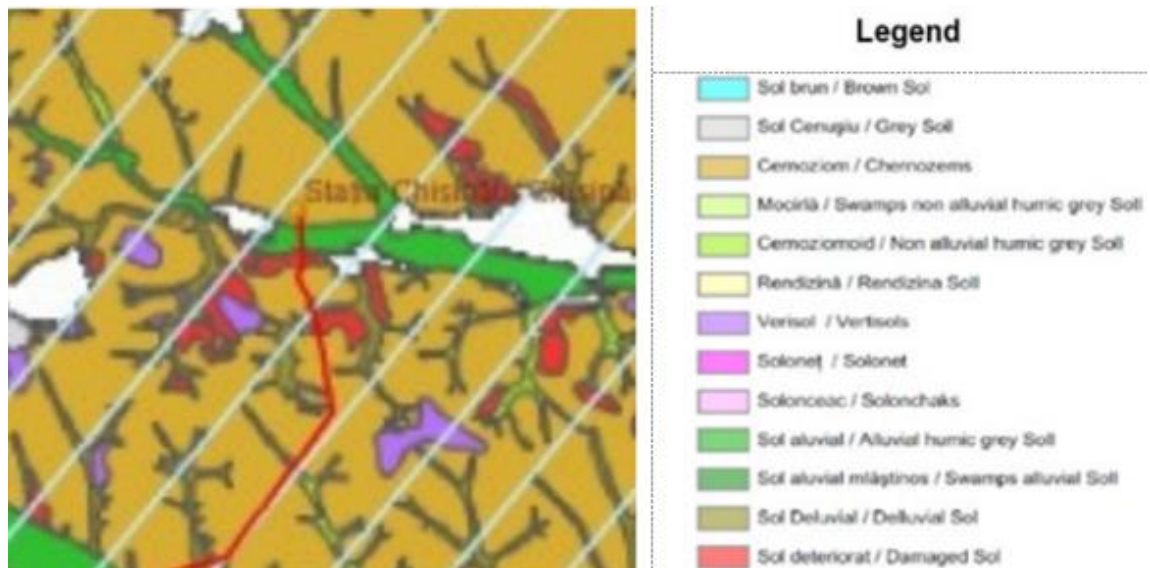


Figure 5-12: Soils types within the Chisinau Substation

According with the prospection works³⁶, the soil and under soil structure of the Chisinau Substation enclosure presents topsoil at 0.00-0.70 m depth and brown sandy clay, hard, macro-pores at 0.70-8.00 m depth. Between 0.50-3.50 m the brown sandy clay presents grains and carbonates intercalations. The Chisinau Substation is not located on area with eroded soils and other unstable lands process.

Distribution of eroded soils within Chisinau Substation area is presented in Figure below.

³⁶ Source: ESIA - https://moldelectrica.md/files/docs/md_ro_project/ESIA_Annexes_Interconnection_Md_Ro_EN_July%202017.pdf



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 62/207

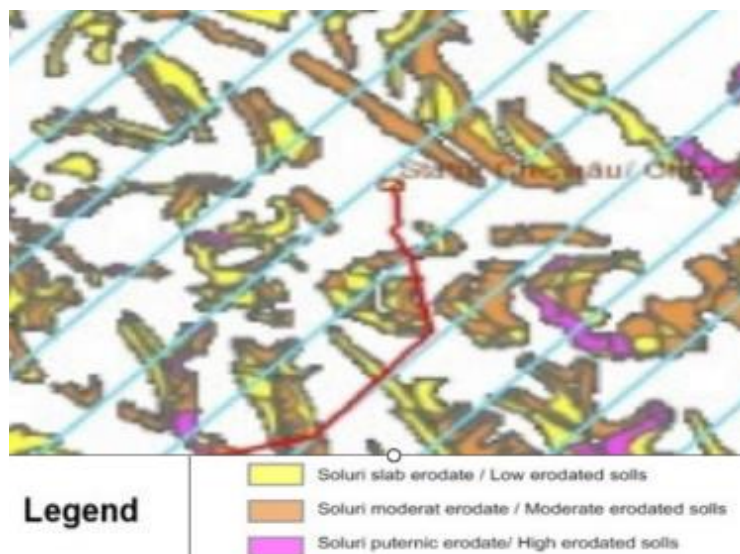


Figure 5-13: Distribution of eroded soils within Chisinau Substation area

The soils quality in Republic of Moldova is strongly influenced by climatic conditions (high temperatures, low rainfall), inappropriate agricultural practices (ineffective methods for agricultural exploitation, use of fertilizers and pesticides) and abusive deforestation. As a result, the soil is affected by erosion, degradation and landslides.

5.1.6 Seismicity

The seismicity of the Republic of Moldova is determined, in particular, by subcrustal earthquakes of intermediate depth in the Vrancea area, located in the territory of Romania at the bend of the Carpathian Mountains.

The Vrancea area represents a permanent and active source of earthquakes, already known for a millennium, which possesses practically unique characteristics on the globe (the small and isolated volume of the seismogenic zone, the directivity of the spread of seismic energy, the enormous affected surface, etc.).



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 63/207



Figure 5-14: Zonation of Seismicity³⁷ of Moldova

The Chisinau Substation area is situated in the 7 Richter zone of seismicity.

5.2 Chemical Environment

5.2.1 Air Quality and Climate Change

Overall, the level of air pollution in Moldova is relatively low compared to other European countries and our neighbors, being mostly within the limits of the World Health Organization air quality guidelines.

Air quality is influenced by human activity, transport, industrial production and natural sources of pollutants, and the historical trend is that air pollution has increased over time, especially in densely populated and industrial areas. The same trend was valid in the case of Moldova - a higher concentration of pollutants is observable only in the capital and near large power plants.

Nitrogen dioxide concentrations in Moldova are generally low. This air pollutant comes mainly from cars and other motor vehicles, electricity generation, light and food industry. It affects the resistance of the respiratory system to bacterial and viral infections.

Sulfur dioxide values are generally low across the country, with only a modest increase around the capital. This pollutant is mostly related to coal-fired power plants, industrial processes, or other fossil fuel burning activities. According to the research of the S.E. Hydrometeo Service (SHS), the amount of sulfur dioxide in the air reaches its highest levels during the winter period, usually increasing five to ten times compared to the summer, due to the heating season. In terms of health

³⁷ <https://igs.asm.md/node/124>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 64/207

impact, short-term exposure to a high concentration of sulfur dioxide can cause serious breathing difficulties (those most affected are asthmatics, children, the elderly and those with chronic respiratory diseases), while long-term exposure at a low concentration it can lead to respiratory tract infections.

The level of air pollution in the site area is influenced by the noxious emissions resulting from the use of natural gas, wood and coal in the heating process, as well as exhaust gases from transport units (local and M3). The volume of emissions from car transport constitutes approximately 90% of the total amount of pollutants in the atmospheric air.

The figure below shows the map of the level of atmospheric air pollution in the municipality of Chisinau according to the Complex Index of Air Pollution produced by the State Hydrometeorological Service.



Figure 5-15: The level of air pollution near the Bacioi commune (Mun. of Chisinau)

According to Hydrometeo Service the Chisinau municipality is one of the most polluted regions in the country. The territory of the Braila village is moderate polluted. Most of the pollutants came from Chisinau and an important local pollution source is International Airport Chisinau. In this region is the one of the landing ways for airplanes.

The Biennial Update Report (BUR3)³⁸ reports that over the last 132 years, the Republic of Moldova has experienced changes in average values of temperature and precipitation. The country had become warmer, with an average temperature increase of more than 1.2°C, while the increase in precipitation was only 51.3 mm.

Moldova is highly vulnerable to climate change and variability, and the socio-economic costs of climate change related to hazards such as droughts, floods, late spring frost, hail are significant.

³⁸ Source: <https://eu4climate.eu/moldova/>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 65/207

5.2.2 Noise and Vibration Levels

The Chisinau Substation is located near the Chisinau airport at the distance of 3.8 km. The runway is 3590 meters in length and 45 meters in width with the assigned 4D - code, being operable 24 hours a day.




Figure 5-16: The location of the Chisinau International Airport and the location of the Chisinau Substation

Maximum sound levels are at points perpendicular to the take-off runway. Apart from the class of aircraft, the noise pollution of the regions adjacent to the airport is affected by: the operations that take place at the airport (take-off, landing, taxiing, heating and engine control), the speed of taking the height of the planes, the height of the flight and the reverberation time of maximum indices. The specific character of aircraft noises, the immediate and rapid growth to high altitudes, the unexpected appearance of the relatively slow background, clarify their unfavorable influence on the population. While various operations are being carried out in the airport's view area, it is necessary to review some aircraft regimes for their performance. So, in the take-off mode, the engines are pushed to the fullest. The use of engine power depends on the take-off weight of the aircraft and the ambient temperature. The noise level produced by the aircraft in movement is 120 dB³⁹.

The level noise produced by the rail ways activity is 100 dB and the railways are at the distance of 8 km from the Chisinau Substation.

³⁹ Poluarea fonica in orasul Chisinau si impactul asupra mediului https://ibn.idsi.md/sites/default/files/imag_file/155-160_5.pdf

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 66/207
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5.2.3 Groundwater Quality

Sub-surface waters are the main source of potable water supply in the Republic of Moldova, for 100% of the rural population and 30% of the urban population, or 65% of the total population of the country. The remaining 35% of the population use surface waters as a source of potable water, including 32% from the Dniester River, 2.8% from the Prut River and 0.2% from other surface waters.

Water quality in wells in the unconfined aquifers does not comply with the national standard for drinking water. Investigations indicate a strong correlation between groundwater quality in unconfined aquifers and land use.

Continuous degradation of drinking water quality is attributed to increased livestock growing in households. There are signs that the human factor plays an increasingly significant role in polluting water in confined aquifers as well, through infiltration of polluted water and through abandoned boreholes. Man-made pollution results in an increasing number of polluted water withdrawal sources that threaten centralised water supply systems in several towns⁴⁰.

The ground water quality of shallow well in the region is poor. The water from artesian wells is also technical in this region.

The quality of ground water from the territory of Chisinau Substation will be available after the geotechnical investigations.

5.3 Biological Environment

5.3.1 General Ecosystem


Surrounding ecosystem is predominant human influenced representing agricultural areas and settlements.

Air pollution caused by emissions from vehicle and machinery might affect the vegetation along the transportation road and around the site. These impacts are short-term and are considered to be minor impacts on the ecosystems and protected areas.

5.3.2 Flora and forest resources

The vegetation is represented by plants specific to plain areas, with some particularities of steppe and forest-steppe. In the est-southern part, there is a strip of tree protection - most likely spontaneous vegetation.

⁴⁰ <https://www.climatechangepost.com/moldova/fresh-water-resources/>

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 67/207
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On the territory of the station, the vegetation on the site is grass that is mowed periodically – area is under maintenance. Around the Station it is represented by the plants of agricultural crops, plant species characteristic of pastures and also numerous elements of vegetal and ruderal flora without conservation value, installed in agricultural crops, at their limits and along asphalted or stone roads.

There are no protected areas in the vicinity of the analyzed territory of Chisinau Substation.

5.3.3 Fauna

5.3.3.1 General

The construction activities of upgrading the Chisinau SS will not have an important impact on the species of fauna existing in the project site.

Most of the species of fauna observed in the site of the station are birds, generally common species, commonly present in cultivated lands and in the vicinity of towns. They are highly mobile and will move to similar existing habitats in the vicinity of the project site, from where they will return when the construction works are completed, so that the population of the species observed on the site will not decrease. No nests or shelters were observed in the site or surrounding area.

For the pylons/towers around the Chisinau SS the protection of birds is described with details in the Avian Risk Assessment specific for construction and operational stages.

5.3.3.1 Local and migratory birds

The result of the Avian Risks Assessment has been prepared by the independent Consultant for 400 kV OHTL and the scope of the assessment is to identify mitigation measures for protection and conservation of all local and migratory birds in the project area for the design stage that are potentially affect their habitats, either positively or negatively, directly or indirectly by the construction and operational activities. The Avia Risk Assessment shall be use also for protection and conservation of all local and migratory birds in the Chisinau Substation area.

5.3.4 Protected Areas

There are no natural protected areas by the State on the territory of the Chisinau Substation, but also within a radius of 5 km.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 68/207



Fig. 5-17: The location of the Ialoveni Reef and Costesti natural monument (signs are Ialoveni Reef and Costesti natural monument)

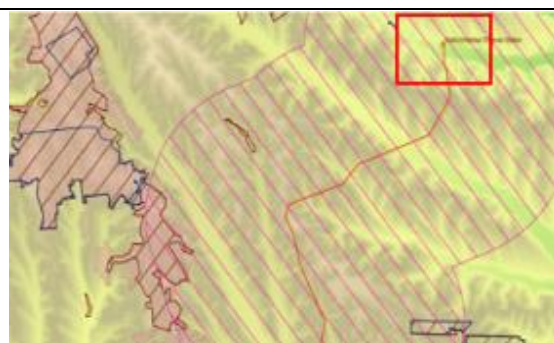


Fig. 5-18: The location of Emerald network versus the location of the Chisinau SS (the pink color is Emerald Site)

The closest natural area is the Ialoveni Reef at 5.2 km far, which is a geological natural monument in the Ialoveni district, Republic of Moldova. It is located on the southwestern edge of the town of Ialoveni, on the way to the village of Costesti, on the left bank of the Ișnovat river. It has an area of 3 ha according to the Law of natural areas protected by the State, the area is administered by the town hall of Ialoveni.

The Republic of Moldova is involved⁴¹, along with the East European and NIS countries, in the implementation of the Joint Programme of the Council of Europe and European Union to establish, under Bern Convention, the Emerald Network as part of the EU's Natura 2000 Network. A number of 48 candidate Emerald sites, including the 12 proposed Important Bird Areas (IBA), have been accepted by the Standing Committee of the Council of Europe in 2016 (T-PVS/PA (2016) 11).

The closest important touristic attraction is Milestii Mici caves and winery situated at 2 km in direct line or 5 km route.

5.3.5 Cultural Heritage

The Ministry of Culture and the National Archaeology Agency are the State Authorities responsible for protection of the national cultural heritage. The Ministry of Culture and the National Archaeological Agency issued the notices and stated that the planned activity for upgrading the Chisinau Substation do not have any cultural and archaeological importance, but for excavation works inside of the Chisinau Substation the Employer shall control the process by approving a Find Chance Procedure developed by the Contractor and control the process by providing training for excavator operators.

⁴¹ The Law no. 94/2007 regarding the ecological network has partially transposed the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora, in force from 2023.11.04



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 69/207

CHAPTER 6: IMPACT ASSESSMENT

6.1 General

Considering the location of the 330/110/35 kV Chisinau SS and the scale of the Project, the characteristics of the receiving natural and human environment it is expected the environmental and social impacts associated with the implementation will be site specific, localised, small scale and mostly temporary, i.e. limited to the construction stage. Such impacts can be mitigated through appropriate site management and construction organization by the contractor. Therefore, the proposed mitigation and enhancement measures are implemented in full, no irreversible and significant negative environmental and social impacts should occur as a result of location, design, construction or operation.

Once the Chisinau SS is in operation, the target population will benefit in terms of quality of electricity supply and economic development for Republic of Moldova. The implementation of the Project will strengthen the capacity of Republic of Moldova as a TSO in the region and will stimulate economic growth and generate new job opportunities.


Most commonly the significance of potential Project impacts is assessed based on the magnitude of the predicted effect and the sensitivity of the receiving environment. Once the environmental sensitivity and impact magnitude has been assessed (chapter 1.4), the two criteria are scaled and weighed by means of a matrix, to determine impact significance (chapter 1). This chapter gives a brief overview of the types of impacts that may occur during construction or operation of the Project and assesses their respective magnitude. Impact significance is then assessed according to the methodology presented in chapter 1 of this report.

6.2 Sensitivity of Impacts during design, construction, operational and decommissioning phases

As mentioned in methodology chapter 1 (1.4), the **Sensitivity** of the receiving environment and social is one among two criteria to assess the **Significance** of impact.

The sensitivity of impact is determined by the following three main criteria:

- a) special regime of protection (applicable ES laws of Republic of Moldova and WB's OPs, regulation, programs, etc.);
- b) value of receptor (economic – use agricultural land, social – e.g. landscape or recreational, environmental – natural habitat, protected area, etc.);
- c) direction & intensity (direction of impact: positive or negative (+ / -); intensity - high, moderate, low, negligible).
- d) special regime of protection;
- e) value of receptor;

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 70/207
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f) direction & intensity.

6.2.1 Valued Environmental and Social Components

Taking into account the description of the initial state of the environment (biophysical and social), the valued environmental and social components are:

- Topography
- Ambient air quality
- Surface water resources (use, pollution)
- Soil resources (destruction, pollution)
- Biological resources (flora, fauna)
- Heritage (natural, cultural)
- Landscape & Aesthetics
- Human Receptors (Local communities, land use, nuisance, living conditions)

6.2.2 Special regime of protection

Within the 330/110/35 kV Chisinau SS, in terms of special regime of protection, the most sensitive receptor (and so making its value Very High) of impact is – obviously – physical, chemical and human receptor.

6.2.3 Sources of Impacts

According to the Contractor's work plan, the upgrading of the 330/110/35 kV Chisinau SS that could be sources of impact are presented in the table below.

Table 6-1: Source of impact (activities) specific for the project life cycle



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 71/207

DP	DESIGN PHASE
1	Topographical survey
2	Soil Survey
3	Site organization in site of the Chisinau SS
4	Development and approval of the Basic Design
5	Development of the draft Technical Design, the draft Site Specific ESIA/ESMP
6	Adaptation and approval process for the DD by the State Authority for design checking
7	Disclosure of the draft SS/ESIA/ESMP and organize public consultation
8	Revise the draft SS/ESIA/ESMP and approve
9	Submit DD, SS/ESIA/ESMP for issuing the Construction Permit
PP	PROCUREMENT PHASE (Submission and approval of Supplier Data -TDS)
1	Procurement Service for performing topographical survey at the design stage
2	Procurement Service for performing detailed soil survey at the design stage
3	Equipment purchase and perform equipment's FAT test
4	Materials purchase to be used for performing civil works
CP	CONSTRUCTION PHASE
1	CIVIL WORKS
1.1	site related investigations, such as surveying, and soil investigation works
1.2	piling or soil improvement works
1.3	all necessary site preparatory and infrastructural works including excavation, levelling, grading, filling, compacting
1.4	site installation works
1.5	supply of labour, materials, equipment, temporary works, tools, etc. necessary for the execution of works
1.6	foundation works for transformer, fire walls for transformer, equipment supports, gantries etc.
1.7	structural and non-structural steel works for gantries, equipment supports etc.
1.8	rehabilitation of relay room building works
1.9	internal and connection roads, foot paths, paving etc.
1.10	coordination of the internal roads of the substation with the quality, geometry and levels of the existing roads
1.11	civil works for cable routing, ducts, channels, road crossings etc.
1.12	fire protection works
1.13	earthing system
1.14	outdoor and indoor lighting systems
1.15	surfacing and landscaping
1.16	heating and air-conditioning (HVAC) works for relay room building
1.17	temporary works, transport and storage of earth material etc., to serve the purpose of the Project.
2	Installation and other services
2.1	Soil arrangement, roads and platforms
3	Autotransformers works
3.1	400 kV and Civil Works and Installation of Equipment
4	Installation of protection equipment & SCMS
5	Testing and Commissioning
6	OHS



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 72/207

OP	OPERATIONAL PHASE
1	Operation of the Chisinau SS
2	Vegetation management
3	Wastes and hazardous materials management
4	Transportation and circulation
5	Purchase of goods/materials and services
6	OHS&SG
DS	DECOMMISSIONING STAGE
1	Removal of installations
2	Purchase of goods/materials and services
3	Transfer construction land in agricultural circuit
4	Wastes management
5	OHS

6.2.4 Intensity and Direction of Impact

The intensity of impact and its direction as well as possible interaction between components are reflected in the table below:

6.2.5 Summary Assessment of Receptor Sensitivity

The following data presented in the Table 6-2, gives an overview of the sensitivity of the relevant components of the receiving environment and social against possible impacts during design, construction, operation and decommissioning stages.

As it was expected, during the **design stage**, the 2 environmental components were given a moderate level of sensitivity:

- Topo and Soil survey – specific for executing soil survey have been temporarily affected during the works in the field;
- OHS & SG - specific for executing soil/topo works have been kept under control by Contractor and MEPIU.

The rest of the valued environmental and social components were attributed a low level of sensitivity.

As it was expected, during **the construction phase**, the environmental and social components were given a moderate level of sensitivity:

- water resources (water use, possible pollution during works, increase of water consumption and waste water generation during construction works would continue to create pressure over the surface water recipients);
- soil resources (impact on top soil, remove the top soil, etc.);
- air quality as of result of performing construction work inside of the Chisinau SS;
- OHS & SG - specific for construction works on site to be controlled by Contractor.

The rest of the valued environmental components were attributed a low level of sensitivity.

As it was expected, during the **operational and decommissioning phases**, the environmental and social components were given a low level of sensitivity.

Table 6-3: Sensitivity of the receiving environment against potential Project impacts

Valued environmental / social components	Sensitivity
Design Phase	
Topography	Moderate
Ambient air quality	Low
Surface water resources (use, pollution)	Low
Soil resources (destruction, pollution)	Moderate
Biological Resources (flora, fauna)	Low
Heritages (Natural, Cultural)	Low
Landscape & Aesthetics	Low
Human receptor	Low
OHS&SG	Moderate



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 75/207

Construction Phase	
Ambient air quality/noise and vibration	Moderate
Surface water resources (use, pollution)	Moderate
Soil resources (destruction, pollution)	Moderate
Biological Resources (flora, fauna)	Low
Heritages (Natural, Cultural)	Low
Landscape & Aesthetics	Low
Human receptor	Low
OHS&SG	Moderate
Operational and Decommissioning Phases	
Ambient air quality/noise and vibration	Low
Surface water resources (use, pollution)	Low
Soil resources (destruction, pollution)	Low
Biological Resources (flora, fauna)	Low
Heritages (Natural, Cultural)	Low
Landscape & Aesthetics	Low
Human receptor	Low
OHS&SG	Low

6.3 Magnitude of Impacts

The second criterion to assess impact significance is the **magnitude** of the impact. Impact magnitude is assessed by evaluating two factors:


- a) *spatial extent* (spatial extent describes the geographical reach of an impact area or the range within which an effect is observable), and
- b) *duration* (describes the length of time during which an impact is observable and also takes other related issues, such as timing and periodicity, into account)

6.3.1 Magnitude of Impacts during Detailed Design Phase

The key construction activities that may adversely affect the natural or the human environment will include but may not necessarily be limited to the following:

Topographical survey will result in performing measurement topo works in side of the Chisinau SS by the Consultant. Given the limited scale of this activity there will be no significant permanent impacts on the key characteristics or important ecological functions in the area, nor will important natural habitats be permanently destroyed.

Soil Survey will inevitably result in performing soil survey by taking samples from the different depth and taking samples using drilling installation performed by the Contractor. Given the limited

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 76/207
---	--	---------------------

scale of this activity there will be no significant permanent impacts on soil quality in the area, nor will important natural habitats be permanently destroyed.

OHS Risks during detailed design stage were kept under control by the contractor specific for soil & topo surveys (Consultants) for performing planned works. OHS risks may occur locally at any of the survey sites and are of temporary nature. Considering the limited numbers of workers involved the magnitude of potential OHS impacts could range from *low to medium* depending on the type of work considered. Overall, the type of survey works involved do bear some risks, however these risks can be considered as more or less ‘standard’ and can be managed by appropriate site management, training / sensitisation and OHS arrangements.

6.3.2 Magnitude of Impacts during Construction Phase

The key construction activities that may adversely affect the natural or the human environment will include but may not necessarily be limited to the following:

Site clearance will inevitably result in cutting existence vegetation from inside of the Chisinau SS (CSS) present on site. The Contractor shall remove the top soil up to 50 cm within the Chisinau SS and storage in a special within CSS. Excess of sterile soil or rock shall be removed from CSS previously agreed with LPA or a licensed quarry. Given the limited scale of these losses there will be no significant permanent impacts on the key characteristics or important ecological functions in the area, nor will important natural habitats be permanently destroyed. Impacts of construction of the site clearance in CSS will be localized, mostly temporary and none will leave permanent measurable negative changes in the receiving environmental and social environment. Overall, the magnitude of the potential impacts resulting from the various construction activities on local environmental and social receptors – including local communities - is thus classified as **moderate**.

Foundation works will result in excavation works and the black top soil shall be removed of up to 50 cm and storage temporary in a special place. Excess of sterile rock/soil shall be removed from the agricultural field and shall avoid mixture of sterile soil with black one. The magnitude of the potential impacts resulting from the various construction activities on local environmental and social receptors – including local communities - is thus classified as **moderate**.

Material and equipment transport: sand and gravel needed for the construction of basement shall be purchased from existing commercial suppliers. Material transport shall be via existing roads and close to the actual construction site temporary access roads will no need to be built. Environmental and social impacts that may typically result from the above construction activities are:

- Localized ambient air pollution through gaseous emissions from construction vehicles & equipment; generation of dust;
- Noise & vibration impacts at the construction sites & off-site (e.g. from construction traffic);



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 77/207

- Impacts on soils (e.g. through accidental spills of hazardous materials such as fuel, oil etc.); soil erosion; generation of construction waste and inappropriate soil management practices incl. soil compaction;
- Temporary local traffic disruptions;
- Impact on community health and safety;
- Impact on employee's health and safety.

All of the above construction impacts will be localized, mostly temporary and none will leave permanent measurable negative changes in the receiving natural or human environment.

Overall, the magnitude of the potential impacts resulting from the various construction activities on local environmental and social receptors – including local communities - is thus classified as **moderate**.

To manage temporary and localized construction impacts of minor or moderate magnitude construction organisation and standard mitigation measures as presented in the ESMP. The scope of the ESMP of this report shall be appropriate to effectively manage the possible Project impacts and to reduce possible environmental and social risks to acceptable levels.

Installation of equipment will result in installation of proposed equipment inside of the Chisinau SS. The magnitude of the potential impacts resulting from this activity specific for local environmental and social receptors – is thus classified as **moderate**. To manage temporary and localized construction impacts of minor or moderate magnitude construction organization and standard mitigation measures as presented in the ESMP. The scope of the ESMP of this report shall be appropriate to effectively manage the possible Project impacts and to reduce possible environmental and social risks to acceptable levels.

Occupational Health and Safety (OHS) will result in affecting direct and contracted employees on construction site. The magnitude of the potential impacts resulting from the construction activity on construction site – including contracted and subcontracted workforce and local communities - is thus classified as **moderate**. To manage temporary and localized construction impacts of minor or moderate magnitude construction organization and standard mitigation measures as presented in the site-specific Occupational Health and Safety Plan which is a stand-alone document and shall be attached to this document. The scope of the site-specific PHS Plan is to identify, assess risks and establish mitigation measures ESMP of this report shall be appropriate to effectively manage the possible Project impacts and to reduce possible environmental and social risks to acceptable levels.

During construction typical occupational health & safety (OHS) risks could occur as a result of the following:

- Operation and movement of heavy machinery and equipment (e.g. excavator, bulldozer, backhoe, trucks);
- Excavation works > 1.2 m deep;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 78/207

- Handling of bulky heavy equipment;
- Working at heights;
- Temporary exposure to elevated levels of noise, heat, dust and weather conditions;
- Material and equipment transport,
- Electrical equipment installation and testing.

OHS risks may occur locally at any of the construction sites and are of temporary nature. Considering the limited numbers of workers involved the magnitude of potential OHS impacts could range from *low to medium* depending on the type of work considered. Overall, the type of construction works involved do bear some risks, however these risks can be considered as more or less 'standard' and can be managed by appropriate site management, training / sensitisation and OHS arrangements.

Social and Gender (SG) will result in affecting direct and contracted employees on construction site. The magnitude of the potential impacts resulting from the construction activity on construction site – including contracted and subcontracted workforce and local communities - is thus classified as **moderate**. To manage temporary and localized construction impacts of minor or moderate magnitude construction organization and standard mitigation measures as presented in the ESMP.


6.3.2 Magnitude of impacts during the operational phase

The key activities that may adversely affect the natural or the human environment will include but may not necessarily be limited to the following:

- Works associated with maintenance and operation of the new equipment of the CSS;
- Vegetation management,
- Waste and hazardous materials management;
- Transportation and circulation,
- Purchase of materials /goods and services.

The abovementioned activities are common for the operator as well as for the local population. One can say the local communities are used to such kind of activities and can easily tolerate or adapt to this type of disturbances. The results of these types of activities are: operational noise and vibration. However, these impacts are local and short-term in magnitude.

Operation and maintenance of the new equipment inside of the Chisinau SS will result in presence and operation of equipment, and inspection and maintenance of equipment. The operation and maintenance process will result also in GHG emissions during operation released from the car fuel engine which consumes gasoline or diesel fuel and will result in a negligible increase of indirect GHG emissions in CSS. The magnitude of the operation and maintenance process is considered to be moderate and the beneficiary shall keep under control these aspects.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 79/207
---	--	---------------------

Vegetation management will result in cutting vegetation inside and outside of the CSS and under the OHTL and removing vegetal wastes from the site. The magnitude of the vegetation management is considered to be moderate and the beneficiary shall keep under control these aspects.

Waste and hazardous materials management will result in wastes generation and hazardous materials from operation and maintenance of the CSS. The magnitude of the waste management process is considered to be moderate and the beneficiary shall keep under control these aspects.

Transportation and circulation will result in transportation of goods and materials etc. and circulation of the beneficiary by using national and local roads in order to inspect the Chisinau SS. The magnitude of this activity is considered to be moderate and the beneficiary shall keep under control these aspects.

Purchase of materials/goods and services will result in purchasing process of different good, materials and services

Health & Safety Risks & Impacts

The main OHS risks for the operator's staff will be related to:

- Maintenance electrical works. Risks associated with maintenance activities (electricity, working at height, moving objects, etc.).
- Small accidents (falls, collision with cars, electric shocks). The frequency of these accidents is not expected to be higher than in other medium-sized factories.

These risks can be considered as ‘standard’ and can thus be minimized by appropriate site management, training / sensitisation and OHS arrangements.

6.3.3 Summary of Key Project Activities and Impact Magnitude

The key activities associated with design, construction, operation and decommissioning of the Chisinau SS are listed in the Table 6-4 and based on identified impacts at the pre-design stage and the assessment of timing, scale, size, and duration the magnitude of possible environmental impacts and risks identified at the detailed design stage is rated as follows:

Table 6-4: Key Project activities and magnitude of potential impacts

Activity/Effects	
Design phase	Impact/ Risk magnitude
Execute topographical survey using	Low (-)
Soil Survey	Low (-)



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 80/207

OHS	Low (-)
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Construction Phase	
Civil works	Moderate (-)
Installation & other services	Moderate (-)
Autotransformers works	Moderate (-)
Installation of protection equipment & SCMS	Moderate (-)
Testing & Commissioning	Moderate (-)
OHS (all construction activities)	Moderate (-)
Operation Phase	
Operation of the new equipment of the Chisinau SS	Low (-)
Maintenance of the new equipment of the Chisinau SS	Low (-)
Vegetation management	Low (-)
Wastes & hazardous materials management	Low (-)
Transportation and circulation	Low (-)
Purchase of materials, goods and service	Low (-)
OHS	Low (-)
Decommission Phase	
Development of the technical report for decommissioning process	Low (+)
Development of the SS/ESMP for decommissioning process & etc.	Low (+)
Receive Demolition Authorisation	Low (+)
Purchase of materials/goods & services	Low (+)
Remove old/obsolete installation	Low (-)
Wastes/hazardous wastes management	Low (-)
Return the location OHTL corridor in the agricultural circuit	Low (+)


6.4 Impact Significance

As was shown above, there are no environmental or human receptors that would be highly sensitive to potential Project impacts or risks during either design, construction, operation and decommissioning phases, in all cases the receptor sensitivity against potential changes and project impacts / risks would be ‘medium’ or ‘low’.

As shown in the risk assessment matrix, the combination of ‘moderate’ or ‘minor’ sensitivities with ‘medium’ or ‘low’ impact magnitude cannot result in ‘significant’ negative impacts.

Table 6-5: Risk assessment matrix

Impact magnitude	Sensitivity
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 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 81/207
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	High	Medium	Low
Major	High	High	Moderate
Moderate	High	Moderate	Minor
Minor	Moderate	Minor	Negligible

The conclusion of this assessment is thus that potential adverse impacts caused by the upgrading the 330/110/35 kV Chisinau SS construction and operation will be of moderate to low significance or for the certain recipients even negligible.

Impacts of minor or moderate significance (residual impacts) can be effectively controlled by common on-site environmental management, OHS management arrangements and mitigation measures to be adopted during construction and operation of the Project. The identified impacts and the proposed mitigation measurements are provided in the chapter 7 of this report.

6.5 Potentially positive impacts

6.5.1 Construction Phase

The upgrading of the Chisinau SS will strengthen the capacity by connecting the new 400 kV OHTL and improve reliability of the power transmission system in Moldova. The final beneficiaries of the power transmission system are the people of the Republic of Moldova.

6.5.1.1 Social Impacts on employment

Construction will create temporary job opportunities over a period that would last approximately 18 months. This will envisage both unskilled and skilled manpower, both man and women mainly recruited within the Bacioi commune. The main staff-demanding activities will be civil works as well as associated support jobs. Another positive impact is building capacities – local managers and workers will be learning from applied modern EU works standards – from best environmental practice to Occupational and Health Safety standards. Impact on local economy Construction of adduction main will require local and imported materials and equipment which are likely to be provided by local retailers or wholesalers which will enhance local economy for a short period.

6.5.2 Operational and decommissioning Phases

6.5.2.1 Compliance with applicable ES laws

During operational and decommissioning phases, the Beneficiary shall ensure compliance with all applicable environmental and social laws specific for operational and decommissioning stages. The Beneficiary shall monitor and measure environmental and social performances and report to the stakeholders and all other interested parties.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 82/207

In order to protect the environmental and social aspects, the beneficiary/operator shall establish, implement, maintain and continually improve an environmental and social management system (ESMS) including the company's processes needed and their interactions for operation and maintenance of the Chisinau Substation.

During the decommissioning stage, the beneficiary/operator shall comply with applicable law of Republic of Moldova regarding the demolition process and shall receive Demolition Authorization for the Chisinau Substation. Identified the environmental and social mitigation measures in the present document shall be taken into consideration for development of an ESMP as well as a Technical Design for demolition process.

6.5.2.2 Community Health and Safety

During operational phase the Beneficiary shall ensure that community health and safety are taken into consideration by monitoring and measuring the level of the noise and vibration, using local roads, installing informational panels, warning signs and communication procedure with community.

6.5.2.3 Opportunities for Gender balanced policy promotion

The Company SE Moldelectrica shall take into consideration possibilities on how to address gender concerns by eliminating discrimination against girls and women in employment opportunities process.

6.6 Potentially negative impacts

6.6.1 Construction Phase

6.6.1.1 Physical impact

Ambient Air

Air pollution in the works period will mainly consist of:

- Emission of dust caused by movements and operation of vehicles and heavy machinery (earthworks) as well as wind erosion from open areas and material stockpiles;
- Dust/particulate matter emission during access road construction;
- Exhaust gases produced by fuel combustion in vehicles, moving and stationary machinery.

Noise and Vibration

Noise will be mainly emitted by the work of machinery and equipment. Part of the constructing activities such as construction of foundations will take place inside of the Chisinau SS. However,



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 83/207

only one village is located within a distance of less than 250 m from the residential areas (able to produce some extra usual background noise). The planned, ordinary construction activities to erect or excavation works will not generate noise that will not exceed 55 dBA sound. This level of noise is the WHO / WB standard for residential zones. The main source of vibration is compaction works during the backfilling of trenches. Taking into consideration that the CSS is located at the enough distance from the village Braila the vibration impact will likely be insignificant.

Destruction / Erosion of Soil

Destruction or erosion of natural soil will mainly occur in the construction site located on agricultural field because of topsoil stripping and earthworks. Rain and wind may also cause loss of soil from stockpiles along the foundations excavated.

Soil pollution can be caused by:

- (i) Accidental spills of fuels, oils and chemicals (e.g.: lubricants, paints, solvents, resins, acids, etc.) in the storage areas / at the Contractor's yard;
- (ii) Accidental dripping or spill in the process of refueling and maintenance of vehicles and machinery at a construction site;
- (iii) Infiltration of leachate from uncontrolled waste disposal and construction material;
- (iv) Residual concrete from construction or discharged from concrete trucks during the construction.

Pollution of Surface Waters

Pollution of surface waters can be caused by:

- Direct discharge of pollutants or polluted waters into the water courses;
- Transfer of soil pollution to the water courses;
- Transport of soil particles, contaminated or not, mobilized by erosion of soils and stockpiles down to the water courses.

Pollution of groundwater can be most likely caused by transfer of soil pollution to the water table. This pollution can be of highest concern if the water table is used by the population through wells and springs. Circulation and level of groundwater can be perturbed by earthworks undertaken for foundation works. Given the location of the works, this impact is not likely to affect the water level or yield of domestic wells.

6.6.1.2 Biological Impacts

Flora and fauna

The upgrading the Chisinau Substation will entail removal of vegetation from the inside of the Chisinau Substation. Perturbation of the Fauna Impact on terrestrial fauna will be mainly caused by:

- The movements of operating machinery, the noise emitted and the presence of workers in the worksites,



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 84/207

- Presence of excavations, open contained and other traps from which the transiting animal cannot escape easily,
- The loss of habitat resulting from tree cutting, vegetation cleaning and topsoil stripping within CSS construction site.

6.6.1.3 Social impacts

Impact on workers' health and safety

Construction operations under the Project are not supposed to create concerning, highly risky situations such as use of explosives or very hazardous substances. However, the risks remain for workers, especially due to the necessary deep excavations.

The workers involved in the civil works will face usual risks factors associated with construction works such as:

- Crushing or striking by heavy mobile equipment, collision between mobile equipment and light vehicles, being trapped, entangled, or struck by machinery parts;
- Falling from heights, from ladders;
- Unstable excavation walls, collapsing excavations, loose objects on the side walls of excavations;
- Collapsing of excavated holes;
- Falling into deep excavation holes;
- Cutting or stabbing by sharp objects;
- Burns from hot or cold surfaces;
- Excessive exposure to dust, noise, vibration and exhaust fume (confined space),
- Electrical shock or burns;
- Eye impairment from welding;
- Extreme weather (cold/hot) working condition.

All these risks are increased if the workers are not sufficiently skilled, experienced, and trained. At the same time, it is to be especially emphasized that OHS risks are minimized by very strict requirements for OHS for contractors. Contractors and sub-contractors shall have the technical capability to manage the occupational health and safety issues of their employees, extending the application of the hazard management activities through formal procurement agreement⁴². International environmental and social standards are those of the World Bank Group and the Core Labour Standards of the International Labour Organization (ILO) and they are mandatory for implementation.

Impact on Health and Welfare of community

The health, safety and welfare of the local community may be affected by:

⁴² The World Bank ESS no. 2 Labor and Working Conditions: <https://thedocs.worldbank.org/en/doc/863471511809509053-0290022017/original/EnvironmentalSocialStandardESS2FactSheetWBESF.pdf>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 85/207

- Accidental risks associated with the open trenches, the workers' activities and the operation and movements of the Contractors vehicles and machinery;
- Accidental risks associated with the general road traffic disturbed by the works;
- The discomfort caused by noise emitted by works for the nearby urban dwellers.

Impact on Road traffic

The following impacts on road traffic are likely to occur (i) Traffic disruption on certain local roads and (ii) National traffic disruption on certain national roads.

Impact on Aesthetics and Landscape

The upgrading the Chisinau SS will take place on existing space and a short impact and not supposed to spoil existing landscapes.

Impact on Cultural Heritage

No building of cultural interest is threatened by the Project works. Even if some archaeological artefacts have been found, there is little chance to find such artefacts when excavating trenches in the agricultural field. However, there is always a chance to discover archeological/historical objects and the Chase Find Procedure (CFP) will be applied.

6.6.2 Operational and Decommissioning Phases

6.6.2.1 Impact on Workers' Health and Safety

The personnel engaged in operation to maintain the new equipment of the Chisinau Substation will have to follow the standard rules of OHS. No special negative impact on workers' health and safety during the operational phase is expected.

6.6.2.2 Physical Impact

Ambient air

Ambient air will not be negatively affected during the operational phase, except normal use of transportation means of the operator.

Impact on ambient noise

No extra noise will be generated by the operation of the Chisinau Substation in comparison to the general levels of background ambient noise.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 86/207

Destruction erosion of soil

The only procedure when soil could be involved as receptor of impacts is excavation during repair interventions. This impact is of negligible magnitude – localized and short term.

Impacts on surface water quality

The operation of the Chisinau Substation will not have negative impact on water resources.

6.6.2.3 Biological Impact

Flora and Fauna

No impacts on flora and fauna are expected during the operational phase of the Project. The operator will have to cut vegetation (grass) inside and outside the Chisinau Substation and monitor the birds along the corridor.

6.6.2.4 Social Impact

Impact on Health and Welfare of population

During operation of the Chisinau Substation no negative impacts on the living conditions of local residents are identified.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 87/207

CHAPTER 7: MITIGATION MEASURES

7.1 General Approach

Considering the type and significance of the expected construction, operational and decommissioning impacts described in this document and Detailed Design, the mitigation measures to be implemented under this Project will be mostly the standard ones rather than site specific for construction and operational phases.

7.2 Mitigation Measures for Construction Phase

7.2.1 General

The requirements outlined in this ESMP are presented to assist the Contractors in developing the Contractor's Environmental and Social Management Plans (CESMPs).

The Contractor shall appoint one Health Safety, Environmental and Social Manager (HSSE), whose duties throughout the construction period will be primarily connected to environmental and social management and health and safety of the sites.

The Contractor shall appoint its environmental and social representative (Environmental and Social Manager) to act as the focal point during the construction phase of the project. This representative will coordinate the contractor's environmental and social activities with the construction and supervision engineer and MEPIU and the State Supervisory Agencies (Env. Protection Inspectorate, Territorial Centre for Public Health and State Technical Surveillance Agency, National Archaeological Agency, etc.) and Central Public Authorities (the Ministry of Infrastructure and Regional Development, Ministry of Environment, Ministry of Culture, Ministry of Agriculture, in implementation, supervision, reporting, and follow-up action with regard to the ESMP.

7.2.2 Mitigation of Environmental and Social impacts

7.2.2.1 Soil and subsoil protection

In order to protect geology and soils, minimize and reduce impacts on geology and soils and add new mitigation measures where possible offset the potential effects for upgrading the Chisinau Substation, the following mitigation measures will be implemented:

- Controlled storage of construction materials and waste generated during the construction works on distinct areas of the site;
- Avoidance of ground storage of materials that exposed to rainfall might lead to soil and groundwater aquifer infiltrations (sealing of storage areas);
- Minimize excavation and removal of surface cover in the areas affected by the upgrading the Chisinau Substation's activities;



MEPIU


POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 88/207

- Provision of parking areas for the vehicles and equipment involved in Project's works. Work area shall be equipped with absorbent materials and/ or neutralizing substances for rapid intervention in case of accidental spillage of fuel and/or lubricants;
- Deposits of fertile soil resulting from the pits excavation will be placed in secure location with run-off and erosion prevented and close to the working area not affecting adjacent surfaces. During wet weather periods, open excavations will be protected by covering with polythene, off-road driving shall be avoided and ruts shall be repaired as soon as possible;
- Limit, where it is possible, vehicle movements in off-road areas mainly in areas with softer soils and on steeper slopes;
- Steep terrain shall be avoided during the transportation of construction material by using alternative routes or use light vehicles where appropriate. Suitable engineering will be undertaken to ensure that the stability of the slope is maintained, including in areas prone to slides;
- For the transport of construction elements and new equipment shall be used, wherever possible, existing roads and way-leaves;
- The waste and package waste generated during Project's activities will be managed in compliance with the relevant legal provisions (selective collection without contact with soil, water; reuse or disposal);
- Upon completion of works will be undertaken activities for land restoration and revegetation, including re-vegetation/ seeding with native species to complement natural vegetation regeneration and to improve ground cover;
- Detailed site investigation for establishing the final positions (foundation), shall be performed during the construction stage of the Project in order to avoid eroded soils and landslides;
- Excavation of the fertile layer shall be done based in the provision of the DD and removed black soil shall be storage in a special place designated/agreed by/with the LPA and territorial Environmental Protection Inspectorate;
- The sterile soil shall be collected on construction site on a special place in order not to contaminate black agricultural soil and shall be removed from the field to a legal quarry or agree with LPA/EPI to storage the excess of construction soil;
- For construction activity, it is forbidden to open new quarry or to excavated for searching construction materials in the close proximity of construction site or outside the construction site;
- Construction activity shall be planned in a way to reduce the compaction of the black soil and at the end of construction compacted portion of plot shall be ploughed;
- In the wet and rainy weather, it is forbidden to use local and national roads with muddy wheels, wheels shall be washed at the exist form construction site;
- It is forbidden to set a fire for burdening dry vegetation, dry debris or other solid wastes.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 89/207
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7.2.2.2 Hydrology/water resources protection

In order to protect hydrology, minimize and reduce impacts on hydrology and add new mitigation measures where possible offset the potential effects for upgrading the Chisinau Substation the following mitigation measures shall be implemented:

- Providing portable toilets for the workers involved in construction stage;
- Sign a contract service with the Apa Canal Chisinau for portable toilets service and clean them 4 times a month;
- Evacuate the content of the mobile toilets (liquid wastes) to the closest wastewater treatment plant and monitor the execution of the requirement;
- Establishment, if possible, foundation in dry locations with well consolidated geology, and avoiding wetland areas or floodplains. However, where this was not possible it was chosen drilled columns foundation types an environmental more friendly solution compared to classic solution foundation;
- Minimize work on soft ground in wet weather, wherever possible;
- Keep all engines in good working condition and repair any leaking equipment immediately in special areas;
- Prevent erosion and run-off of sediment from construction works, including roads, to watercourses;
- Controlled storage of construction materials and waste generated during the execution stage on distinct areas of the site;
- Avoidance of ground storage of materials that exposed to rainfall might lead to groundwater aquifer infiltrations (sealing of storage areas);
- Forbidding watercourse crossing by vehicles and machinery during construction
- Forbidding discharges of any water or other materials to watercourses, the storage of soil or other materials close to watercourses;
- Provision of oil/ storm water tank, placed bellow energy transformer on a concrete foundation for protection against transformer oil spill;
- In case of emergency situation, the leakage and spills kits shall be present in the construction site and all pollutant shall be collected and removed from the field;
- Emergency equipment shall be additionally present on construction site to prevent fire and other emergency situations;
- Rain water shall be evacuated from the construction site by covering the excavated pit with polyethylene/poly propylene sheet to avoid accumulation of rain water in the pit.

7.2.2.3 Air protection

In order to minimize and reduce impacts on air quality and identify new mitigation measures where possible offset the potential effects for the upgrading the Chisinau Substation the following mitigation measures shall be implemented:



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage


Page: 90/207

- Minimize the open excavation areas and proper coordination of excavation activities (excavation, grading, compacting, etc.);
- The number of transport means used for materials and equipment's erection are rather small, in line with associated quantities;
- The equipment's used for erection of each equipment shall not work simultaneously and shall respect the sequence works, according with specific technical norms;
- Apply water sprinkling measures to reduce dust, in case of visible dust generated by vehicles or other activities;
- Reduce speeds on unpaved roads until water sprinkling measures are in place;
- Maintain all construction machinery and equipment's in good working condition;
- Vehicles carrying aggregate materials will be sheeted at all times,
- According the Republic of Moldova's applicable environmental law it is forbidden to set the fire in the field or burn solid wastes (paper and cardboard, food, etc.) or dry vegetation and for other reason in the construction site,
- Dyes and solvents in the construction process shall be kept covered all time to avoid excess evaporation in the hot weather,
- Other measures.

7.2.2.4 Climate change

In order to minimize and reduce impacts on climate change and identify new mitigation measures where possible offset the potential effects for upgrading the Chisinau Substation, the following mitigation measures shall be implemented:

- Receive endorsements from all stakeholders for Basic Design and approval received from the Beneficiary and LPAs by taking into consideration the main climate - meteorological condition at the construction works to protect equipment, access route, sanitary zone, and other substation facilities;
- In the construction process to avoid soils and landslides by covering excavated pit with covers in order to avoid water accumulation,
- An Emergency Response Plan shall be developed for potential risks and hazards (natural hazards and extreme events that may include floods, storms, lighting, landslides, soil erosion, seismic events) in order to protect the public health, safety and environment when hazards may create an emergency situation,
- A communication plan in case of emergency situation shall be developed and tested with contractor's personnel and local community,
- Site Organization shall not be located in the flooded area and eroded soil,
- For Site organization located outside the Chisinau Substation, the Contractor shall develop an OHS Plan and Environmental and Social Plan specific for this activity.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 91/207
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7.2.2.5 Noise and vibration

In order to minimize and reduce impacts on noise and vibration and identify new mitigation measures where possible offset the potential effects of the construction/upgrading the Chisinau Substation the following mitigation measures shall be implemented:

- Use of vehicles and machines with a high degree of quietness, equipped with vibration damper with regular technical inspections carried out to date;
- Compliance with daily working hours;
- During day time, procedures will be established to reduce the noise causing nuisance and disturbances, both for workers and local communities;
- Activities during the holidays, nights or at the weekend will be avoided;
- Movement of the vehicles transporting material and equipment on dirt or ballasted with roads with speeds up to 20 km/h,
- The Contractor shall comply with the provisions of the Traffic Management Plan approved by MEPIU.

7.2.2.6 Cultural Heritage

During the construction phase, more destructive effects may occur on archaeological artefacts presents in soil.

Recommended mitigation measures include:

- Ceasing work as soon as historical and cultural monuments are encountered during earthworks or other construction activities
- Providing relevant information to the National Archaeological Agency (NAA). NAA will determine the value of the historic/archaeological remains and provide guidance on if and how to proceed with the construction. This may include excavating or otherwise documenting the monuments before proceeding, or in cases of very valuable features, developing a design to avoid the features at that site.

7.2.2.7 Community health and safety

In order to minimize and reduce impacts on public and occupational health the new identified mitigation measures where possible offset the potential effects of the construction/upgrading the Chisinau Substation the following mitigation measures shall be implemented:

- Ensure implementation and compliance with the Action Plan on Occupational Health and Safety.
- Preparation of Emergency Response Plan for construction site;
- Preparation of code of conduct to be adhered to by personnel and subcontractors involved in construction work linked to the Chisinau Substation;
- Preparation of Traffic Management Plan with defined routines for traffic and transportation to construction sites, especially considering safety issues linked to passing settlements, avoiding schools and close to habited places;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 92/207

- Preparation of Training Plan to ensure that contractor's and subcontractor's workers are aware and comply with existing safety regulations and action plans;
- Preparation of Community HSP to ensure that community is safety during the project's implementation and sources of water, soil, air is not polluted by the construction works;
- Participate as an attendee at the SIMC meeting and take measures to eliminate nonconformities identified by the community representative in the field.

7.2.2.8 Handling and Storage of Hazardous Materials and Wastes

During the construction phase, more destructive effects may occur in relation to handling and storage of hazardous materials. The scope of this aspect is to minimize contamination of the immediate surroundings as well as to reduce or eliminate the potential risk of exposure to hazardous materials for workers and the public.

Recommended mitigation measures include:


- Storing hydrocarbons and hazardous materials on impervious ground under cover and constructing the storage area as a spill tray to avoid spread of accidental spills
- Providing safe ventilation for storage of volatile chemicals
- Restricting and controlling access to areas containing hazardous substances
- Siting all hot mix plant, crushing plant, workshops, depots, and temporary workers accommodation facilities in approved locations
- In the event that hazardous wastes need to be handled, procedures and plan developed by the Contractor shall be followed.

7.2.2.9 Construction Wastes

During the construction phase, more destructive effects may occur in relation to handling and storage of the construction wastes.

Recommended mitigation measures include:

- Estimating the amounts and types of spoil and construction waste to be generated by the project
- Providing for zones of preliminary accumulation of wastes that will cause no damage to the vegetation cover and other components of the environment
- Identifying potential safe disposal sites close to the project sites, and in consultation with EA/EPI investigating the environmental conditions of the disposal sites and preparing recommendations on the most suitable and safe sites.
- Transferring and disposing unsuitable excavated material in designated locations agreed to by relevant organizations. The disposal site shall be far from groundwater resources and away from low-lying areas.
- Systematically carrying away unsuitable excavated materials from areas prone to erosion
- Reusing waste materials wherever possible

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 93/207
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- Recovering and reusing or removing used oil and lubricants from the site in full compliance with the national and local regulations (only within designated area)
- Burning of oil wasted, debris, or other waste material is prohibited.

7.2.2.10 Social and Gender

During the construction phase, the Social and Gender Plan (SGP) will aim at addressing specific social and gender issues.

Under the SGP the Contractor is required to:

- Ensure exchange of information between Contractor and the local population. This includes installing by Contractor of information boards in the Braila village and Bacioi commune.
- Contractor is encouraged to contribute to job-creation for the local population (if any), with target on women and youth, but also other groups. This may include small-scale supply contracts or services, while announcement of jobs required may be published on the information boards.

7.2.2.11 Trafficking in Persons (TIP)

Trafficking in Persons is defined as the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation.

Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour and child labour or services, slavery or practices similar to slavery, servitude or the removal of organs.

Contractor's TIP Mitigation Plan must include, but not limited to:

- A signed statement that the Contractor certifies that it is not engaged in, facilitating or allowing TIP, forced labor or child labor for the duration of the contract.
- The Contractor will ensure that TIP will not be tolerated on the part of employees or contract workers and that engaging in TIP is cause for suspension or termination of employment or of the contract; accordingly, Contractor should include this provision in the Employment Contracts.
- Raising the level of awareness of employees, and sub-contractors and workers on the issue including providing information on the risk areas and the penalties for involvement in TIP. The raising of awareness will be ensured through conducting of a number of training for the Contractor's staff and sub-contractors. Conducting of TIP, forced and child labour awareness can be done separately or as part of the Operational Safety and Health training.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 94/207

- A requirement and system to report suspicions or know incidents of TIP to MEPIU and responsible Government authorities; and to refer potential victims to appropriate agencies. The contact information of these authorities should be made known to all workers and other participants of the awareness campaign, inclusively through the distribution of leaflets.

7.2.2.12 HIV/AIDS and STD

Contractor's HIV/AIDS and Sexually Transmitted Diseases (STD) Plan shall be aimed at:

- Avoiding conflicts with local communities by providing resources for worker requirements at camp stores and regulating outside visits.
- Avoiding the potential spread of vector borne diseases and communicable diseases, such as STDs and HIV/AIDS, through awareness and prevention activities among construction workers.
- Conducting awareness programs on HIV/AIDS and STD prevention for the population close to the construction campsites.

HIV/AIDS and STD Prevention Measures under the Plan shall include, but will not be limited to the following actions:


- Launch awareness programs on HIV/AIDS and STI prevention for the project population.
- Provide HIV and STI prevention materials for construction workers, such as booklets, pamphlets, posters, in local language(s).
- Launch awareness programs on HIV/AIDS and STI prevention for construction workers.
- Include HIV and STI prevention intervention clauses in construction contracts
- Discourage abuse of drugs (alcohol and narcotics).
- Tailor messages to the general workforce, and separately to men and women.
- Use professional organizations such as NGOs and Community Based Organizations (CBOs) working on HIV prevention.
- Subsidize male and female condom distribution for construction workers
- Provide Information on Access to Comprehensive HIV and STI Services
- Educate communities and workers on how to avoid STIs, to recognize common STI symptoms, and to seek treatment via confidential referral systems

Provide Information on Voluntary Counseling and Testing (VCT) Services in the Project area or elsewhere in proximity to the Project area

- Publicize the existence of anonymous VCT service (testing, pre-test, and post-test counseling)

Provide Information on Access to Treatment of Opportunistic Infections (OIs):

- Educate people on how to avoid OIs, to recognize common OI symptoms, and to seek treatment.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 95/207
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7.2.2.13 The Code of Conduct

Based on the provisions specified in the OHS Chapter, the Contractor shall develop the CoC Plan before starting the construction activities on construction site within 30 days. This document shall be accepted by the CS Engineer and approved by MEPIU.

To ensure full compliance of construction activities with the provisions of the CoC, the Contractor shall organize training with all personnel and explain rules established in the CoC and sign a declaration or minute of training and among other issues, the Contractor shall ensure that requirements of the CoC is respecting in the construction site by installing on the construction site a workable grievance mechanism for receiving complaints at all times and regularly train the workers accordingly.

7.2.2.14 Occupational health and safety

Based on the provisions specified in the Occupational Health and Safety Chapter, the Contractor shall develop an OHS Plan before starting the construction activities on construction site within 30 days. This document shall be approved by the CS Engineer.

To ensure full compliance of construction activities with the provisions of this ESMP, the Contractor shall nominate a suitably qualified, experienced OHS Manager/Officer at the site full-time. The OHS Manager/Officer will, among other issues, be responsible to ensure occupational health & safety (OHS) at all times and regularly train the workers accordingly (induction training; toolbox talks etc.).


7.3 Operational Phase

7.3.1 General

The requirements outlined in this ESMP are presented to assist the Operator in developing the Operator's Environmental and Social Management System and Plans developed based on Global Industrial International Standards (ISO 14001, ISO 45001 and ISO 9001).

The Operator or Beneficiary shall appoint Environmental and Social (HS) Specialists for establishing, maintaining and continually improve ES management System, whose duties throughout the operational period shall be primarily connected with compliance with applicable to environmental and social laws of the Republic of Moldova and IFIs environmental and social requirements.

The Operator shall comply with applicable environmental and social requirements of Republic of Moldova and shall receive all permits and authorizations for their provided services and quality of their product.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 96/207
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7.3.2 Mitigation of Environmental and Social Impacts

7.3.2.1 Air protection

During the operational phase of the Chisinau SS, there may occur more destructive effects on air quality:

➤ Air pollution resulting from the generation of (i) Dust, which may be contaminated with other pollutants, resulting from earthworks, loading / unloading of construction materials, etc. and (ii) Emissions of air pollutants due to the operation of vehicles used for transport and equipment used for construction works.

To prevent these harmful effects on air quality, the following the following measures of prevention / reduction / compensation must be taken:

- Prevention of dust formation by spraying with water during periods of dry weather;
- Limiting the work areas and the duration of works execution;
- Daily cleaning of access roads towards the site and work points (removal of soil and sand) to prevent dust formation;
- Controlling and securing materials against spillage during the transportation to the storage sites, including the earth from digging and excavations;
- Measurement of the ozone concentration at the Chisinau Substation and electro-magnetic field inside and outside the Chisinau Substation.

7.3.2.2 Climate change


The mitigation measures proposed to minimize and reduce impacts on climate change for operation and maintenance of the Chisinau Substation are the following:

- Regular inspection of the Chisinau Substation as part of maintenance program shall be performed;
- Emergency response planning is required for natural hazards and extreme events (floods, storms, lightning, landslides, seismic events, etc.),
- To monitor the soil erosion and landslides on the Chisinau Substation and in case of emergency report the State Authority;
- Other mitigation measures identified at the risk assessment process within ESMS.

7.3.2.3 Noise and vibration

The mitigation measures proposed to minimize and reduce impacts on noise and vibration for operation and maintenance of the Chisinau Substation are the following:

- The noise and vibration from the Chisinau Substation shall be reduced by using constructive methods (antivibrators and spacers),
- Measure the noise and vibration inside/outside the Chisinau Substation;
- Other mitigation measures identified at the risk assessment process within ESMS.

 <p>MEPIU</p>	<p align="center">POWER SYSTEM DEVELOPMENT PROJECT</p> <p align="center">The ESIA&ESMP specific for</p> <p align="center">upgrading the 330/110/35 kV Chisinau Substation</p> <p align="center">The Detailed Design Stage</p>	<p align="right">Page: 97/207</p>
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7.3.2.4 Vegetation management

The mitigation measures proposed to minimize and reduce impacts on the vegetation for operation and maintenance of the Chisinau Substation are the following:

- Integrated vegetation management approach shall be implemented consisting in removal and cutting the grass growing inside and outside the substation and removing trees and low-growing shrubs;
- It is forbidden to make noise in the close proximity of the forest in the period of the birds' breeding and nesting period;
- It is forbidden to cut dry trees and set fire in the forest or in the hedgerows;
- It is forbidden to collect plants and other goods from the forest;
- Other mitigation measures identified at the risk assessment process within ESMS.

7.3.2.5 Electrocutation collision

The mitigation measures proposed to minimize and reduce impacts on the natural protected areas for operation and maintenance of the Chisinau Substation are the following:

- Regular inspection of the Chisinau Substation as part of maintenance program shall be performed;
- Emergency response planning is required for natural hazards and extreme events (floods, storms, lightning, landslides, seismic events, etc.),
- Comply with requirements established in the Avian Risks Assessment Report specific for operational stage by monitoring and measurements of the death birds by the Beneficiary SE Moldelectrica and report to the Environmental Agency annually;
- Establish a communication procedure with Environmental Agency for environmental performances reporting;
- Other mitigation measures identified at the risk assessment process within ESMS.

7.3.2.6 Electric and magnetic fields

The mitigation measures proposed to minimize and reduce impacts from electric and magnetic fields during operation and maintenance of the Chisinau Substation are the following:

- Regular inspection of the Chisinau Substation as part of maintenance program shall be performed;
- Emergency response planning is required to be fulfilled by the operator for emergency aspects;
- Personnel working with operation and maintenance of Chisinau Substation shall be informed and trained in safety procedures linked to work in environments where they are exposed to electric and magnetic fields;
- Ensure that follow-up routines are in place and implemented to document that workers and contractors comply with safety regulations. In case of deviations ensure that actions are taken to rectify the situation;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 98/207

- Ensure that the electric and magnetic field is measured by operator accordingly within inside and outside of the Chisinau Substation;
- Develop a reporting mechanism within ESMS and inform workers regarding the result of electro-magnetic EM measurement;
- Other mitigation measures identified at the risk assessment process within ESMS.

7.3.2.7 Occupational health and safety

The mitigation measures proposed to minimize and reduce impacts public and occupational health during operation and maintenance of the Chisinau Substation are the following:

- Ensure implementation and compliance with the Action Plan on OHS;
- Keep Emergency Response Plan updated and relevant for operation and maintenance;
- Routines for traffic and transportation linked to operation and maintenance of the Chisinau Substation is in place. Special attention should be given to safety when passing settlements, schools and close to habited places.
- Routines to follow-up and to ensure that all workers and contractors are aware and comply with existing safety regulations and action plans.
- Ensure that access to the towers is restricted and that safety measures to avoid people climbing towers are functional;
- Information material on towers displaying warning signs and instructions on what to do in case of accidents.

7.4 Decommissioning Phase

7.4.1 General

The requirements outlined in this ESMP are presented to assist the Beneficiary/Operator in the decommissioning process to be in compliance with applicable laws of Republic of Moldova.

During the decommissioning stage, the operator shall comply with applicable law of Republic of Moldova regarding the demolition process and shall receive Demolition Authorization for the Chisinau Substation. Identified the environmental and social mitigation measures in the present document shall be take into consideration for development of an ESMP as well as a Technical Design for demolition process.

7.4.2 Mitigation of Environmental and Social Impacts

The Operator or Beneficiary shall develop the following documents specific for decommissioning process:

- Technical report,
- Development of the Site specific ESMP for decommissioning process,
- Organize public consultations and inform community and LPA,



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 99/207

- Receive Demolition Authorization,
- Purchase of materials/goods & services,
- Remove old/obsolete installation,
- Manage wastes and hazardous wastes,
- Manage OHS risks,
- Return the OHTL corridor in the agricultural circuit.

Environmental and Social Management Plans (ESMPs) have been prepared specific for construction and operational stages as part of the present ESIA in order to define the implementation mechanism for the above-described mitigation measures and preventive actions.

In the table 7-1 is presented mitigation measures in the ESMP for Construction Stage.

Table 7-1: Mitigation measures presented in the ESMP for Construction Phase

Type of Impact & Potential Negative Impact	Environmental & Social mitigation measures	Location	Executing agency	Supervising agency	Budget	Timing
ENVIRONMENT						
Operation of heavy construction machinery and equipment	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	Code of Conduct	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	TMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Maintenance Management Plan for heavy construction machinery and equipment prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
Mobilisation / site preparation (delivery of materials, delivery of construction machinery and vehicles; mobile camp installation)	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	Code of Conduct	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	QMP for materials prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	OHS Plan prepared and approved including mobilization and site preparation	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
Site clearance (removal & temporary storage of top soil & clearance of waste)	Compliance with applicable environmental requirements	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	Construction Schedule & Work Plan
	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
Vegetation clearance	Compliance with applicable environmental requirements	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	Construction Schedule & Work Plan
	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 101/207

Type of Impact & Potential Negative Impact	Environmental & Social mitigation measures	Location	Executing agency	Supervising agency	Budget	Timing
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Compliance with applicable environmental requirements (chapter 7)	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	
Excavation works and temporary storage of excavated materials	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Compliance with applicable environmental requirements	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	
Transport and temporary storage of construction materials	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Traffic Management Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
Backfilling	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Compliance with applicable environmental requirements regarding soil excels evacuation	Chisinau SS	Contractor	CSE EA, EPI, LPA	Included in construction costs	
The road rehabilitation	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME		
	Compliance with applicable environmental requirements regarding soil excels evacuation	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA		
Oils leakages (electrical equipment works)	Emergency Preparedness and Response Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	During works and temporal storage
	Use of earth protection materials (spill try = plywood plate +10 cm timber embankment etc.)					
	Absorbent (or sand)					
Lubricants leakage (machinery camp, traffic)	Emergency Preparedness and Response Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME EA, EPI, LPA	Included in construction costs	Daily, During construction



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 102/207

Type of Impact & Potential Negative Impact	Environmental & Social mitigation measures	Location	Executing agency	Supervising agency	Budget	Timing
Electrical equipment installation and testing	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Construction Schedule & Work Plan
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
Noise, dust	CESMP prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	Daily, During construction
	OHS Plan prepared and approved	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	
	Community Health and Safety	Chisinau SS Braila Village	Contractor	CSE/MEPIU/ME	Included in construction costs	
SOCIAL						
Human Resources	HR Policy prepared and approval	Chisinau SS	Contractor	CSE/MEPIU/ME	Included in construction costs	During the Construction Phase
Threat of HIV/Aids and STD	HIV/AIDS & STD Plan prepared and approved	Chisinau SS	Contractor/ Subcontractor for providing training	CSE/MEPIU/ME	Included in construction costs	During the Construction Phase
Trafficking in Persons, SH, etc.	TiP prepared and approved	Chisinau SS	Contractor/ Subcontractor for providing training	CSE/MEPIU/ME	Included in construction costs	During Construction Phase
Child labor	Human Resource Plan prepared and developed	Chisinau SS	Contractor Subcontractor	CSE/MEPIU/ME LPA/CPA	Included in construction costs	During Construction Phase
Code of Conduct (CoC)	CoC prepared and approved	Chisinau SS	Contractor Subcontractor	CSE/MEPIU/ME LPA/CPA	Included in construction costs	During Construction Phase


 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 103/207
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Table 7-2: Mitigation measures presented in the ESMP for Operational and Decommissioning Phases

Type of Impact & Potential Negative Impact	Environmental & Social mitigation measures	Location	Executing agency	Supervising agency	Budget	Timing
OPERATIONAL PHASE						
ES Management System	ESMS establishes, implements & maintains by the Beneficiary	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
OHSP	Legal and other requirement procedure prepared & approved by the Company Top Management. Training for Managers & H&S responsible personnel according to position level,	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Compliance with applicable ES laws (WB's ESSs)	Legal & other requirement procedure prepared and approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Risks assessment	Risk Procedure prepared & approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Training and capacity development	Training and capacity development Procedure & Plans prepared and approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Monitoring and measurement equipment	Monitoring and Measurement Equipment Procedure and Plan prepared and approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Emergency situations	EPR Procedure and Plans prepared and approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Performances reporting	Communication procedure prepared and approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Human Resource policy	HR Policy prepared & approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
Social and Gender imbalance	Social & Gender Plan prepared & approved by the Company Top Management	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
DECOMMISSIONING PHASE						
Wastes & hazardous wastes management (SF ₆ , PCBs, used oil, etc.)	Decommissioning Criterion shall be in compliance with applicable RM legal (Development of technical report for decommissioning process)	Chisinau SS	Moldelectrica	MoEN/WB	Beneficiary's Budget	O&M Plan
OHS	Development of OHS Plan specific					



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 104/207

CHAPTER 8: OCCUPATIONAL HEALTH AND SAFETY

8.1 General minimum OHS requirements specific for Chisinau Substation

MEPIU shall ensure that prior to the setting up of a construction site an OHS Plan is drawn up setting out the rules applicable to the construction site concerned, taking into account where necessary the industrial site-specific activities taking place on the site; this plan must also include specific measures concerning risks control.

Within the context of his responsibilities, the Contractor shall take measures necessary for the safety and health protection of workers, including prevention of occupational risks and provision of information and training, as well as provision of the necessary organization and means. The Contractor shall be alert to the need to adjust these measures to take account of changing circumstances and aim to improve existing situations.

The Contractor shall implement measures on the basis of the following general principles of prevention:

- (a) avoiding risks;
- (b) evaluating the risks which cannot be avoided;
- (c) combating the risks at source;
- (d) adapting the work to the individual, especially as regards the design of work places, the choice of work equipment and the choice of working and production methods, with a view, in particular, to alleviating monotonous work and work at a predetermined work-rate and to reducing their effect on health.
- (e) adapting to technical progress;
- (f) replacing the dangerous by the non-dangerous or the less dangerous;
- (g) developing a coherent overall prevention policy which covers technology, organization of work, working conditions, social relationships and the influence of factors related to the working environment;
- (h) giving collective protective measures priority over individual protective measures;
- (i) giving appropriate instructions to the workers.

Without prejudice to the general principles of prevention, the Contractor shall, taking into account the nature of the activities of the enterprise and/or establishment: evaluate the risks to the safety and health of workers, inter alia in the choice of work equipment, the chemical substances or preparations used, and the fitting-out of work places.

Subsequent to the risk assessment and as necessary, the preventive measures and the working and production methods implemented by the Contractor must:



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 105/207

- (a) assure an improvement in the level of protection afforded to workers with regard to safety and health, be integrated into all the activities of the undertaking and/or establishment and at all hierarchical levels;
- (b) where he entrusts tasks to a worker, take into consideration the worker's capabilities as regards health and safety;
- (c) ensure that the planning and introduction of new technologies are the subject of consultation with the workers and/ or their representatives, as regards the consequences of the choice of equipment, the working conditions and the working environment for the safety and health of workers;
- (d) take appropriate steps to ensure that only workers who have received adequate instructions may have access to areas where there is serious and specific danger.

Without prejudice to the prevention of occupational risks and provision of information and training, where several subcontractors share a work place, the Contractor shall cooperate in implementing the safety, health and occupational hygiene provisions and, taking into account the nature of the activities, shall coordinate their actions in matters of the protection and prevention of occupational risks, and shall inform one another and their respective workers and/or workers' representatives of these risks.

8.2 Stability and solidity

Materials, equipment and, more generally, any component which, when moving in any way, may affect the safety and health of workers must be stabilized in an appropriate and safe manner.

Access to any surface involving insufficiently resistant materials is not authorized unless appropriate equipment or means are provided to enable the work to be carried out safely.

8.3 Energy distribution installations

The installations must be designed, constructed and used so as not to present a fire or explosion hazard; persons must be adequately protected against the risk of electrocution caused by direct or indirect contact.

The design, construction and choice of equipment and protection devices must take account of the type and power of the energy distributed, external conditions and the competence of persons with access to parts of the installation. Specific electrical requirements are presented in the chapter 8.14 Work involving electrical hazard.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 106/207

8.4 Emergency routes and exits

Emergency routes and exits must remain clear and lead as directly as possible to a safe area. In the event of danger, it must be possible for workers to evacuate all workstations quickly and as safely as possible.

The number, distribution and dimensions of emergency routes and exits depend on the use, equipment and dimensions of the site and of the rooms and the maximum number of persons that may be present.

Specific emergency routes and exits must be indicated by signs in accordance with the national regulations implementing Directive 77 / 576 /EEC. Such signs must be sufficiently resistant and be placed at appropriate points.

Emergency routes and exits, and the traffic routes and doors giving access to them, must be free from obstruction so that they can be used at any time without hindrance.

Emergency routes and exits requiring illumination must be provided with emergency lighting of adequate intensity in case the lighting fails.

8.5 Fire detection and fire fighting

Depending of the characteristics of the site, the dimensions and use of the rooms, the on-site equipment, the physical and chemical properties of the substances present and the maximum potential number of people present, an adequate number of appropriate fire-fighting devices and, where required, fire detectors and alarm systems must be provided.

These fire-fighting devices, fire detectors and alarm systems must be regularly checked and maintained. Appropriate tests and drills must take place at regular intervals.

Non-automatic fire-fighting equipment be easily accessible and simple to use. The equipment must be indicated by signs in accordance with the national regulations implementing Directive 77 / 576/EEC. Such signs must be sufficiently resistant and placed at appropriate points.

8.6 Ventilation

Steps shall be taken to ensure that there is sufficient fresh air, having regard to the working methods used and the physical demands placed on the workers. If a forced ventilation system is used, it must be maintained in working order and must not expose workers to draughts which are harmful to health. Any breakdown must be indicated by a control system where this is necessary for workers' health.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 107/207

8.7 Exposure to particular risks

Workers must not be exposed to harmful levels of noise or to harmful external influences (e.g. gases, vapors, dust).

If workers have to enter an area where the atmosphere is liable to contain a toxic or harmful substance or to have an insufficient oxygen level or to be inflammable, the confined atmosphere must be monitored and appropriate steps taken to prevent any hazards.

A worker may not in any circumstances be exposed to a high-risk confined atmosphere.

He must at least be watched at all times from outside and all appropriate precautions must be taken to ensure that he can be assisted effectively and immediately.

8.8 Temperature

During working hours, the temperature must be appropriate for human beings, having regard to the working methods used and the physical demands placed on the workers.

8.9 Natural and artificial lighting of workstations, rooms and traffic routes on the site

Workstations, rooms and traffic routes must as far as possible have sufficient natural lighting and be provided with appropriate and sufficient artificial lighting at night and when natural daylight is inadequate; where necessary, portable light sources that are protected against impact must be used.

The colour of artificial light used must not alter or affect the perception of signals or signposts.

Lighting installations for rooms, workstations and traffic routes must be placed in such a way that there is no risk of accident to workers as a result of the type of lighting fitted.

Rooms, workstations and traffic routes where workers are especially exposed to risks in the event of artificial lighting must be provided with emergency lighting of adequate intensity.

8.10 Doors and gates

Sliding doors must be fitted with a safety device to prevent them from being derailed and falling over.

Doors and gates opening upwards must be fitted with a mechanism to secure them against falling back.

Doors and gates along escape routes must be appropriately marked.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 108/207

In the immediate vicinity of gates intended primarily for vehicle traffic, there must be doors for pedestrian traffic unless it is safe for pedestrians to cross; such doors must be clearly marked and kept free at all times.

Mechanical doors and gates must operate without any risk of accident to workers. They must be fitted with emergency stop devices which are easily identifiable and accessible and, unless they open automatically in the event of a power-cut, it must be possible for them to be opened manually.

8.11 Traffic routes — danger areas

Traffic routes, including stairs, fixed ladders and loading bays and ramps, must be calculated, located, laid out and made negotiable to ensure easy, safe and appropriate access in such a way as not to endanger workers employed in the vicinity of these traffic routes.

Routes used for pedestrian traffic and / or goods traffic including those used for loading and unloading must be dimensioned in accordance with the number of potential users and the type of activity concerned. If means of transport are used on traffic routes, a sufficient safety clearance or adequate protective devices must be provided for other site users. Routes must be clearly marked, regularly checked and properly maintained.

Sufficient clearance must be allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases.

If the site includes limited-access areas, these must be equipped with devices to prevent unauthorized workers from entering. Appropriate measures must be taken to protect workers who are authorized to enter the danger areas. Danger areas must be clearly signposted.

8.12 Loading bays and ramps

Loading bays and ramps must be suitable for the dimensions of the loads to be transported.

Loading bays must have at least one exit point.

Loading ramps must be sufficiently safe to prevent workers from falling off.

8.13 Freedom of movement at the workstation

The floor area at the workstation must be such as to allow workers sufficient freedom of movement to perform their work, taking account of any necessary equipment or appliances present.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 109/207

8.14 First aid

The Contractor must ensure that first aid can be provided, and that the staff trained to provide it can be called upon, at any time. Measures must be taken to ensure that workers who have had an accident or have suddenly been taken ill can be removed for medical treatment.

One or more first-aid rooms must be provided where the scale of the works or the types of activity being carried out so require.

First-aid rooms must be fitted with essential first-aid installations and equipment and be easily accessible to stretchers. They must be signposted in accordance with the national regulations implementing Directive 77 / 576 /EEC.

In addition, first-aid equipment must be available at all places where working conditions so require. This equipment must be suitably marked and easily accessible. The address and telephone number of the local emergency service must be clearly displayed.

8.15 Sanitary equipment

Changing rooms and lockers

Appropriate changing rooms must be provided for workers if they have to wear special work clothes and if, for reasons of health or propriety, they cannot be expected to change in another area. Changing rooms must be easily accessible, be of sufficient capacity and be provided with seating.

Changing rooms must be sufficiently large and have facilities to enable each worker, where necessary, to dry his working clothes as well as his own clothing and personal effects and to lock them away. If circumstances so require (e.g. dangerous substances, humidity, dirt), facilities must be provided to enable working clothes to be kept in a place separate from workers' own clothes and personal effects.

Provisions must be made for separate changing rooms or separate use of changing rooms for men and women. If changing rooms are not required, each worker must be provided with a place in which he can lock away his own clothes and personal effects.

Showers and washbasins

Suitable showers in sufficient numbers must be provided for workers if required by the nature of the work or for health reasons. Provisions must be made for separate shower rooms or separate use of shower rooms for men and women.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 110/207

The shower rooms must be sufficiently large to permit each worker to wash without hindrance in conditions of an appropriate standard of hygiene. The showers must be equipped with hot and cold running water. Where showers are not required under the first paragraph, a sufficient number of suitable washbasins with running water (hot water if necessary) must be provided in the vicinity of the workstations and the changing rooms. Provisions must be made for separate washbasins, or separate use of washbasins for men and women when so required for reasons of propriety. Where the rooms housing, the showers or washbasins are separate from the changing rooms, there must be easy communication between the two.

Lavatories and washbasins

Special facilities with an adequate number of lavatories and washbasins must be provided for workers in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers or washbasins. Provisions must be made for separate lavatories or separate use of lavatories for men and women.

Rest rooms and/or accommodation areas

Where the safety or health of workers, in particular because of the type of activity carried out or the presence of more than a certain number of employees as well as the remote nature of the site, so require, workers must be provided with easily accessible rest rooms and / or accommodation areas.

Rest rooms and/ or accommodation areas must be large enough and equipped with an adequate number of tables and seats with backs for the number of workers concerned.


If there are no facilities of this kind, other facilities must be provided in which workers can stay during interruptions in work.

Fixed accommodation areas unless used only in exceptional cases, must have sufficient sanitary equipment, a rest room and a leisure room. They must be equipped with beds, cupboards, tables and seats with backs taking account of the number of workers, and be allocated taking account, where appropriate, of the presence of workers of both sexes.

Appropriate measures should be taken for the protection of non-smokers against discomfort caused by tobacco smoke in rest rooms and / or accommodation areas.

8.16 Pregnant women and nursing mothers

Pregnant women and nursing mothers must be able to lie down to rest in appropriate conditions.

 <p>MEPIU</p>	<p align="center">POWER SYSTEM DEVELOPMENT PROJECT</p> <p align="center">The ESIA&ESMP specific for</p> <p align="center">upgrading the 330/110/35 kV Chisinau Substation</p> <p align="center">The Detailed Design Stage</p>	<p align="right">Page: 111/207</p>
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8.17 Handicapped workers

Workplaces must be organized to take account of handicapped workers, if necessary. The provision applies in particular to the doors, passageways, staircases, showers, washbasins, lavatories and workstations used or occupied directly by handicapped persons.

8.18 Other miscellaneous requirements

The surroundings and the perimeter of the site must be signposted and laid out so as to be clearly visible and identifiable.

Workers must be provided at the site with a sufficient quantity of drinking water and possibly another suitable non-alcoholic beverage both in occupied rooms and in the vicinity of workstations.

Workers must: — be provided with facilities enabling them to take their meals in satisfactory conditions, — where appropriate, be provided with facilities enabling them to prepare their meals in satisfactory conditions.

8.19 Specific OHS requirements during the earthworks

Excavations with a depth of more than 1.5 m with vertical walls must be supported obligatorily, if necessary, by the access of workers inside the excavation, regardless of the soil cohesion and stability. Depending on the soil stability and the vibrations produced in the working area, excavations smaller than 1.5 m will be also supported, by using supports made of wooden planks with a thickness of 4-6 cm and spacers.

The support of excavations for foundations or ditches with a depth of more than 5 m must be carried out, as a rule, with inventory items according to the rules in force. For excavations with depths more than 5 m, the supports must be made only after specially designed projects for this purpose.

The condition of the trench slopes will be checked daily, before starting/restarting the works (at the beginning of the shift, after the lunch break or other technological interruptions). Special attention shall be also paid to checking the slopes when restarting works after the rainfall.

The reverse bucket excavator digs in trenches by recoiling, unloading the earth on the shore, at a distance of at least 0.5 m from the edge of the trench. In case of unloading into the dumper, it will be done from behind. Each machine will be equipped with acoustic and light signals.

It is forbidden to transport workers on the excavator, on the ladder or in its bucket.

Any maneuver with the back part of the excavator will be directed by a trained person.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 112/207

It is forbidden to stop within the area of the excavator.

As a rule, the excavation will not be left uncovered at night, in case of need it will be fenced, delimited or signaled with light signals.

If unidentified underground installations are detected during the excavation, works will be stopped and the occupational safety and health coordinator or site manager will be notified, who will take measures to avoid damaging them and to eliminate all hazards.

It is forbidden to hit, cut or damage underground installations encountered during the excavation. If the presence of underground electrical cables, or gas, water or sewage pipes are encountered in the excavation area, the excavations shall be executed only manually, in order to avoid breaking them, under the supervision of a technical staff and taking all measures to prevent accidents of any kind, using equipment and tools appropriate to certain situation.

In case of accidental breaking or cracking of a gas pipeline, measures shall be taken to stop the crack as far as possible by covering it with textile material and earth, smoking and the use of open fire shall be prohibited, passers-by shall be evacuated and shall be notified as soon as possible the services authorized to remedy the malfunction. If the depth of the excavation is greater than 1 m, the climbing down into the trenches will be done only on leaning stairs, which will allow the rapid evacuation of workers in case of danger. The stairs will be 0.7 m above ground level and must be certified. Workers and pedestrians are not allowed to walk or stop in the maneuvering area of the excavator bucket plus 5 m, by delimiting the area with a warning strip and a sign prohibiting the access and risk warning. If the excavator maneuvers affect the roadway or the works are carried out in the immediate vicinity of the roads, the work area will be signaled by road signs that warn drivers about the works. Signs will be placed in accordance with the traffic management.

When unloading the excavated earth from the bucket of the excavator directly into the vehicles, it is forbidden to pass the bucket over the vehicle cab, to unload into the vehicle from the height and to be in the vehicle at the time of unloading. It is forbidden for the driver to remain in the cab while loading the vehicle. It is forbidden to pass or stop under the bucket or the arm of the excavator/crane while working. Pedestrian crossings with railings on both sides will be provided for pedestrians.

8.20 OHS requirements during installation works

Unloading of materials from the means of transport shall be done manually or mechanically, depending on their size and weight.

Laying the equipment or materials on the edge of the excavation hole/trench (in the stack) will be done at a distance of at least 1.5 m from the edge.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 113/207

The materials shall be stored for launching in the foundation hole on the opposite side of the excavated earth deposit, at a distance of at least 1.0 m from the edge of the hole or under an angle to it, materials shall be secured against rolling with wooden stops.

Workers may go down into the hole only after the final execution of the consolidation (panel mounted and crane removed) and checking the edges of the hole in order to remove the materials that may fall (there will be checked the edges of the ditch and will be removed all the materials on a width of at least 1 m from the edge).

The loading/unloading operations of the materials and equipment shall be performed with mechanized means. The working personnel who will perform these operations shall be trained and shall comply with the legal provisions specific to these activities and shall be authorized as a hanger. Fastening the materials on the crane or excavator hook will be performed with the help of catching device or, in case of prefabricated provided with hanging places and elements, by means of auxiliary devices (cables, compensators, etc.).

It is forbidden to enter under the load during the lifting operation.

It is forbidden to balance the load by hanging or climbing the workers on it.

In case some handling is required, ropes or cables shall be used.

It is forbidden to put into operation the lifting mechanism if its chains or cables are worn beyond the permissible limits.

The workers authorized to perform loading/hanging operations must know the signaling code of the lifting mechanisms, as well as the sequence of operations, in order to signal correctly and in time (operations), the maneuvers.

The presence of persons within the area of lifting installation is prohibited.

The direction of load position during the movement is done with cords, ropes, etc.

It is forbidden to stop or move under a suspended load, as well as to carry loads over people, equipment or installations.

The storage shall be done in such a way as not to block the area of lifting equipment handling, the traffic roads and the passages for the working personnel. If the storage is done in the stack, this shall not exceed 1.8 m. Foreigners are not allowed in the temporary storage area.

Any activity performed under electrical aerial lines (EAL), with the possibility of entering into the electric field of equipment subassemblies (arm, bucket, etc.) or of the personnel, shall be executed only after the voltage interruption in EAL and with the assurance of interruption.

If this is not possible, for work execution near the electrical aerial lines, cranes and excavators used for such kind of works must be located so that during their operation to follow the distances - neighborhood boundary between the line conductors and / or any of their part, arm or the handled load.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 114/207

The works with the equipment near EAL will be performed only under the strict supervision of the team leader, who is responsible for the entire activity at the working point, taking all measures of occupational health and safety activities to avoid accidents and dangers that may occur while performing these activities.

It is forbidden to work near the EAL in strong winds and at the first signs of landslides.

8.21 OHS requirements during welding works

General security requirements

When performing electric and gas welding works, the requirements of international standards must be observed. Welders must be provided with personal protective equipment and a protective shield in accordance with applicable international standards.

Only qualified workers who have completed specialized courses, have passed a special training in the field of occupational safety and health, are recorded in a special register, have qualification cards and are over 18 years old are admitted to the welding works.

Welders must pass at least every three months an occupational safety training and knowledge examination, as well as the examination of their performance.

Welders must be equipped with work and protection equipment provided in the regulations, depending on the welding procedure applied and the workplace.

The places of executing the welding works must be cleared of flammable materials within a radius of at least 5 m, and of explosive materials - within a radius of at least 10 m.

It is forbidden to perform welding works in open air, in rain or snow.

The tightness of the hoses must be thoroughly checked when carrying out gas welding works in closed vessels. At the slightest gas leak, works must be stopped immediately.

Welding, cutting and heating with open fire of appliances, vessels and pipes containing liquids or gases under pressure, filled with flammable or harmful substances is not allowed, without coordination of security measures with the organizations that operate them.

Welders working at height must be equipped with safety belts and special boxes for storing electrodes and their debris.

If the welding site cannot be fenced with sight shields, then warning signs must be placed around the workplace where it will be written "DO NOT LOOK- WELDING".

Safety requirements during welding works

Fixing the hose of gas pipes to nipple burners, knives and gas pressure reducers, as well as in the places of hose connection must be done with fixing clamps.

For arc welding it is necessary to use insulated flexible cables, calculated for safe operation at maximum electrical loads, taking into account the duration of the welding cycle.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 115/207

The welding of cables must be done by casting, welding or soldering the connected places with subsequent insulation.

The cables must be connected to the welding equipment by means of pressed or glued sleeves.

When installing or moving the welding conductors, it is necessary to take measures against damage of the insulation and contact with water, oils, steel cables and hot pipes.

The distance from welded conductors to hot pipes and oxygen cylinders must be at least 0.5 m, but with flammable gases not less than 1 m.

The workplaces of welders when performing open arc welding must be separated from the workplaces of other workers and paths with fireproof screens (screens, shields) with a minimum height of 1.8 m.

8.22 OHS requirements during concrete works

Concrete Transportation

The concrete shall be transported from the production station by dumpers or other means of transport. On the site, the concrete shall be transported with concrete pumps, transporters, bunkers, tip lorries, dumpsters, etc.

It is forbidden for people to stop within the area of machine involved in transporting concrete.

Unloading the concrete from the concrete mixer in the means of transport will be done only when it is under the concrete discharge mouth.

The following safety measures must be observed when transporting and pouring concrete using concrete pumps:

- The concrete pump will be placed so that the mechanism can see the place where the concrete is poured;
- The personnel serving the concrete pump will be required to wear protection glasses;
- The pipe for transporting the concrete will be tested after the installation, with a hydraulic pressure 50% higher than the pressure of the working regime, recording the test results in minutes;
- Starting the concrete pump will be done only after emitting a sound signal;
- Prior to the introduction of concrete into the pipe, all joints and connections must be thoroughly checked by specially trained and authorized personnel for this purpose;
- Disassembly of the concrete pump or pipe will be carried out only after stopping the operation of the installation and lowering the pressure up to atmospheric pressure;
- Cleaning the pipes for transporting concrete with compressed air or water will be done at a pressure of about 1.5 MPa. During cleaning, workers must be at least 10 m away from the pipe;
- The proper operation of the manometer at the concrete pump shall be checked daily.

The working pressure will be marked with a red line on the glass of the manometer dial;

- When the pump or any other element in the pumping system fails or when concrete plugs are formed in the pipe, the operation of the pump must be stopped immediately.

Repair works must be carried out by trained personnel in this matter.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 116/207

At the end of the pouring process, the devices for concrete transportation must be cleaned and washed obligatorily.

The transport time of the concrete from the place of preparation to the place of pouring must not exceed the time required to preserve the technological qualities of the concrete.

Formwork

The formwork components for pouring concrete and reinforced concrete constructions must be well assembled and consolidated with each other.

The formwork elements must be installed in strict accordance with the instructions within the execution projects and the technological sheets.

When installing the formwork elements in several levels, each next level will be installed only after the safe consolidation of the lower level.

It is forbidden to place equipment and materials on the formwork, which are not provided in the project.

The installation of the formwork is considered completed only after the assembly of all elements in the final position, with all the connections provided according to the technical documentation.

The formwork for reinforced concrete plates should be installed only after the final fixing of the parts that make up the skeleton. The installation of the formwork will be carried out from a temporary floor placed on the skeleton beams and secured on contour with protective parapets.

It is forbidden to use, as well as to force or hit the supporting elements.

The formwork and formwork removal operations must be carried out under the permanent supervision and direct responsibility of the foreman and the team head, who will ensure that they are carried out in their technological order.

Reinforcement assembly and fitting

The reinforcement of concrete elements shall be done according to the provisions of the project regarding the work execution.

The persons who receive the reinforcement on site are obliged to check that this complies with the standards and provisions of the technical documentation.

The unwinding and straightening of the steel for reinforcement of concrete constructions must be done on a specially arranged ground for this purpose and fenced.

The elements of reinforcement framings must be packed taking into account the conditions of lifting, transport and storage at the places of installation.

The welding of reinforcement and the installation of steel-concrete carcasses shall be done with the strict compliance of the rules provided by the norms.

When performing the reinforcement pre-tensioning works, it is necessary:

➤ To surround the places where people pass by with the protection fences with the height of at least 1.8 m;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 117/207

- To use the devices of reinforcement stretching with sound signal system, operated once the motor of stretching device is started;
- Not to allow people to be at a distance less than 1m from the place of bars heating with electricity.

It is forbidden to mount the welded reinforcement or carcasses in beams or other insulated elements on the bottom of the formwork. These works must be executed from the floors next to the formwork with a width of at least 0.7 m with parapets and timber on the edge, mounted on regulatory scaffolding. In case floors with parapets cannot be executed, the installation of reinforcement at height will be done with the use of safety belts attached to fixed points.

The transportation, processing and storage of the reinforcement shall be carried out in such a way that it is not soiled with mud and in particular with grease, fuel oil, bitumen and other materials which may worsen the joint work of the reinforcement and the concrete.

Concrete pouring and compacting


Before starting to pour the concrete into the formwork, the site manager must check the condition of the dumps, formwork, scaffolding and work floors. Defects found must be removed immediately.

When pouring the concrete from bunkers or dumps, the distance from their bottom edge and the previously poured concrete or the surface on which the concrete is poured must not exceed 1 m. Workers working on pouring concrete on surfaces with an inclination of more than 20 degrees must be equipped with safety belts, fastened with solid and resistant elements. It is forbidden the access of foreigners on the pouring area, where there is a danger of concrete falling.

When compacting concrete with vibrators, the following safety measures must be taken:

- Vibrators must be checked before starting the work;
- The vibrator housing must be grounded, and the working personnel working with the vibrators must wear rubber boots and electrically insulating gloves;
- The electrical conductors that supply the vibrators must be flexible and insulated in a rubber tube;
- During the movement of the vibrator or when the work is interrupted for a very short time, it must be disconnected from the electric network;
- It is forbidden to move or operate tubular vibrators with power conductors;
- In case of damage of the vibrator during the work, it must be immediately disconnected and handed over to the electrical personnel of the site for verification.

When compacting the concrete with vibrators, only the personnel (workers) who have passed the handling and occupational safety instruction must be admitted.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 118/207
---	--	----------------------

8.23 OHS requirements during masonry works

Organization of works

The safety of masonry works must be ensured based on the technical documentation of work organization, according to the provisions of OHS:

- The organization of workplaces, by indicating the construction and the places of installing pavement means, devices of weight hanging, forklifts, means of containerization and packaging;
- The order of work execution in order to ensure the durability of the construction;
- Defining the construction and location of protective equipment against workers' falling from the height and objects falling nearby the building;
- Additional security measures to ensure the stability of the masonry during the cold period of the year.

The scaffolding means used for execution of masonry works at height must be of industrial construction made according to standardized projects.

It is forbidden to build the next level of masonry, unless the floor elements have been installed or if a temporary floor has not been installed on the floor beams.

When building exterior walls, on interior scaffolding, with a height of more than 7 m, protective visors must be installed on the outer perimeter of the building, which must meet the following requirements:

- The width of the protective visors must not be less than 1.5 m, they being mounted at an angle of 20°, and the free space between the masonry and the edge of the roofing shall not exceed 50 mm;
- Protective visors must be calculated at the uniformly distributed load from the snow layer and a concentrated load of 160 kg applied in the middle of the opening;
- The first row of visors will be kept until the end of the masonry and will be mounted at most 6.0 m from the ground, and the second row of visors, mobile, will be mounted at 6-7 m from the first row, being permuted during masonry execution over every 6-7 m.

Organization of workplaces

The masonry is required to be carried out on intermediate slabs between floors or pavement means. The height of each layer is assigned to the wall so that the level of the masonry, after each change in pavement level, is not less than two rows above the level of the work platform.

The level of masonry after each permutation of the work floor must be at least 0.7 m above the level of the floor or slab. If masonry is required below the indicated level, workers will use safety belts or protection nets must be fitted.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 119/207

Workers responsible for mounting, cleaning or removing protective visors must be provided with safety belts attached to the fixed points of the building. It is forbidden to circulate and store materials on protective visors, as well as to use them as scaffolding.

It is allowed to build masonry higher than 7.0 m without mounting the protective visors, only if mesh fences are mounted at the level of the masonry.

It is forbidden to leave on masonry unused materials, waste or tools when works are interrupted.

Procedure of carrying out the works

The raw stone masonry shall be made, obligatorily, in formwork made of board panels with a thickness of 4-5 cm, propped with the help of props spaced at most 2.0 m apart from each other along the wall. The installation of the formwork is done in parallel with the execution of the masonry, and the dismantling - after the mortar has reached the resistance provided by the project or at the direction of the foreman.

Handling and bringing of bricks, small blocks and other materials to the workplace shall be done in special devices, provided to prevent materials from falling from a height.

The construction of the walls below and at floor level, made of prefabricated reinforced concrete panels, must be carried out from the scaffolding located on the lower floor. It is not allowed to install the floor boards without installing a brick fencing wall on the perimeter of the building which will be two times higher than the panels that are being installed.

The jointing of the exterior masonry must be carried out on the floor or scaffolding after the construction of each row. It is forbidden for workers to be on the wall during this operation.

In case of masonry or cladding of the exterior walls of multi-level buildings, it is forbidden to carry out works during storms, heavy snowfalls, fog, which reduce visibility in the workplace, or when the wind speed is over 15 m / s.

8.24 OHS requirements during the execution of roofs and covers works

During roofing works, with soft roofing materials in rolls and metal roofing, measures must be taken to prevent workers from being exposed to dangerous and harmful factors related to the nature of the work:

- Arranging the workplaces near places with a variation of 1.3 m and more;
- Increased level of air pollution in the work area;
- High or low temperature on the surfaces of work equipment, materials and air;
- Sharp edges, burrs and roughness on the surfaces of equipment and materials;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 120/207

➤ High voltage in the electrical network, short circuit that can radiate through the human body.

In the presence of dangerous and harmful factors, the safety of workers executing the cover works must be ensured on the basis of the organizational-technological documentation according to the occupational safety measures:

- Organizing the workplaces at height, passageways to workplace, special safety measures, when working on a sloping roof;
- Safety measures for the preparation and transportation of mastic and hot materials;
- Methods and means of lifting materials and tools on the roof, storage method, work sequence.

The installation of roofs with a gas flame must be carried out only with a work permit, which provides the necessary security measures.

Only people who are appropriately qualified and trained in occupational safety must be admitted to the execution of roofs and coverings.

The admission of workers to the execution of roofs is allowed only after checking the condition of the supporting elements and the fences by the foreman or by the supervisor together with the chief of the team who will execute the works.

Before starting the works, all electrical installations and networks that are on the roof or pass over must be disconnected.

Lifting the workers on the roof will be done only on interior stairs, any other means of climbing up or down (on incendiary stairs, scaffolding stairs, floors of lifting mechanisms, etc.) are strictly prohibited.

In order to carry out works on roofs with a slope of more than 20° or on their edge, the workers must be equipped with safety belts and non-slip footwear. The fastening places for the safety belt will be indicated by the foreman or the chief of the team.

For passage of the workers on roofs with covers that are not calculated for loads regarding workers weight or with a slope bigger than 20°, floors with a width of at least 0.3 m with transversal battens shall be used, which must be well reinforced by the roof ridge or other elements fixed and durable.

The placement of the materials on the roof is allowed only in the places indicated by the project of work execution, by taking measures against their fall, including protection against wind. During work interruption, tools and materials must be reinforced or lowered to the ground.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 121/207

It is not allowed to carry out roofing works during storms and winds with the speed greater than 11 m / s, frost, fog and other weather conditions that worsen visibility within the working front.

It is forbidden for workers to move on roof frames or on high beams. If this is necessary, a scaffolding with a width of at least 0.8 m must be built, provided with regulatory railings.

When carrying out covering works by using sealants and other harmful substances, workers must be provided with appropriate means of protection.

It is forbidden to throw materials and tools from the roof. At the end of the working day, the roof must be cleaned of debris and tools, which must be lowered from the roof.

When flammable and slowly flammable insulation sticker is used in the construction of roofs, rolled bitumen materials arranged by the flame method, are allowed to be arranged only on sand and cement or asphalt screed.

8.25 OHS requirements for lifting equipment

All lifting devices and accessories, including their component parts, attachments, anchoring's and supports, must be:

- (a) properly designed and constructed and sufficiently strong for the use to which they are put;
- (b) correctly installed and used;
- (c) maintained in good working order;
- (d) checked and subjected to periodic tests and inspections in accordance with current legislation'
- (e) operated by qualified workers who have received appropriate training.

All lifting devices and accessories must clearly display their maximum load values. Lifting equipment and accessories may not be used for other than their intended purposes.

8.26 OHS requirements for scaffolding and leaders

All scaffolding must be properly designed, constructed and maintained to ensure that it does not collapse or move accidentally.

Work platforms, gangways and scaffolding stairways must be constructed, dimensioned, protected and used in such a way as to prevent people from falling or being exposed to falling objects.

Scaffolding must be inspected by a competent person:

- (a) before being put into service;
- (b) subsequently, at periodic intervals;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 122/207

(c) after any modification period without use, exposure to bad weather or seismic tremors, or any other circumstance which may have affected its strength or stability.

Ladders must be sufficiently strong and correctly maintained. They must be correctly used, in appropriate places and in accordance with their intended purpose.

Mobile scaffolding must be secured against spontaneous movements.

8.27 OHS requirements for atmospheric influences

Workers must be protected against atmospheric influences which could affect their health and safety.

8.28 OHS requirements for falling objects

Wherever technically feasible, workers must be protected by collective methods against falling objects.

Materials and equipment must be laid out or stacked in such a way as to prevent their collapsing or overturning.

Where necessary, there must be covered passageways on the side or access to danger areas must be made impossible.

8.29 OHS requirements for falling from a height


Falls from a height must be physically prevented in particular by means of solid cradles which are sufficiently high and have at least an end-board, a main handrail and an intermediate handrail or an equivalent alternative.

In principle, work at a height must be carried out only with appropriate equipment or using collective protection devices such as cradles, platforms or safety nets. If the use of such equipment is not possible because of the nature of the work, suitable means of access must be provided and safety harnesses or other anchoring safety methods must be used.

8.30 OHS requirements for health surveillance

To ensure that workers receive health surveillance appropriate to the health and safety risks they incur at work, measures shall be introduced in accordance with national law and/ or practices.

The measures shall be such that each worker, if he so wishes, may receive health surveillance at regular intervals.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 123/207
---	--	----------------------

Health surveillance may be provided as part of a national health system.

8.31 OHS requirements for safety equipment

The Contractor shall take the measures necessary to ensure that the work equipment made available to workers in the undertaking or establishment is suitable for the work to be carried out or properly adapted for that purpose and may be used by workers without impairment to their safety or health.

In selecting the work equipment which he proposes to use, the employer shall pay attention to the specific working conditions and characteristics and to the hazards which exist in the undertaking or establishment, in particular at the workplace, for the safety and health of the workers, and any additional hazards posed by the use of the work equipment in question.

8.32 OHS requirements for personal protective equipment at the workplace

Before starting the construction activity on site, the Contractor shall assess risks and develop an OHS Plan. OHS Plan shall be developed based on preventive principle taking into consideration that workers have the right to a healthy, safe and well-adapted working environment. The workers' right to a high level of protection of their health and safety at work and to a working environment that is adapted to their professional needs and that enables them to prolong their participation in the labour process includes the use of personal protective equipment at the workplace if risks cannot be avoided or sufficiently limited by other means, measures, methods or procedures of work organisation.

8.33 OHS requirements for manual handling of loads

The Contractor shall take appropriate organizational measures when develops OHS Plan, or shall use the appropriate means, in particular mechanical equipment, in order to avoid the need for the manual handling of loads by workers.

Where the need for the manual handling of loads by workers cannot be avoided, the Contractor shall take the appropriate organizational measures, use the appropriate means or provide workers with such means in order to reduce the risk involved in the manual handling of such loads.

8.34 OHS requirements for hearing protection

Employers shall make adjustments in the light of technical progress and scientific knowledge regarding risks related to exposure to noise, with a view to improving the health and safety protection of workers.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 124/207

The Contractor shall assess and, if necessary, measure the levels of noise to which workers are exposed.

If the risks arising from exposure to noise cannot be prevented by other means, appropriate, properly fitting individual hearing protectors shall be made available to workers and used by them at the workstation:

- (a) where noise exposure exceeds the lower exposure action values, the Contractor shall make individual hearing protectors available to workers;
- (b) where noise exposure matches or exceeds the upper exposure action values, individual hearing protectors shall be used;
- (c) the individual hearing protectors shall be so selected as to eliminate the risk to hearing or to reduce the risk to a minimum.

The Contractor shall make every effort to ensure the wearing of hearing protectors and shall be responsible for checking the effectiveness of the measures taken in compliance with applicable laws of Republic of Moldova.

8.35 OHS requirements for signs at work

The Contractor shall provide safety and /or health signs where hazards cannot be avoided or adequately reduced by techniques for collective protection or measures, methods or procedures used in the organization of work, or ensure that such signs are in place. The Contractor shall take into account any risk during the risk assessment process.

The signs used shall be installed on construction site, wherever appropriate for such forms of activity:

- (a) Safety and/or health signs refer to a specific object, activity or situation and providing information or instructions about safety and / or health at work by means of a signboard, a color, an illuminated sign or acoustic signal, a verbal communication or a hand signal, as the case may be;
- (b) prohibition sign refers to a sign prohibiting behavior likely to incur or cause danger;
- (c) warning sign refers to a sign giving warning of a hazard or danger;
- (d) mandatory sign refers to a sign prescribing specific behavior;
- (e) emergency escape or first-aid sign refers to a sign giving information on emergency exits or first-aid or rescue facilities;
- (f) information sign refers to a sign providing information other than that referred to in (b) to (e);
- (g) signboard refers a sign which provides specific information by a combination of a geometric shape, colors and a symbol or pictogram and which is rendered visible by lighting of sufficient intensity;
- (h) supplementary signboard refers to a signboard used together with one of the signs described under (g), which provides supplementary information;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 125/207

- (i) safety color refers to a color to which a specific meaning is assigned;
- (j) Symbol or pictogram refers to a figure which describes a situation or prescribes specific behavior and which is used on a signboard or illuminated surface;
- (k) illuminated sign refers to a sign produced by a device made of transparent or translucent materials which are illuminated from the inside or the rear in such a way as to give the appearance of a luminous surface;
- (l) acoustic signal refers to a coded sound signal which is released and transmitted by a device designed for that purpose, without the use of a human or artificial voice;
- (m) verbal communication refers to a predetermined spoken message communicated by a human or artificial voice;
- (n) hand signal a movement and / or position of the arms and /or hands, in coded form, for guiding persons who are carrying out maneuvers which constitute a hazard or danger for workers.

8.36 OHS requirements related to exposure to asbestos (if any)

Asbestos is a particularly dangerous agent which may cause serious diseases and which is found in a large number of circumstances at work. Many workers are therefore exposed to a potential health risk. Crocidolite is considered to be a particularly dangerous type of asbestos.

It shall be ensured that excavation works or demolition of asbestos materials is carried out by the contractor/subcontractors which are familiar with all the precautions to be taken in order to protect workers.

Special training for workers exposed or likely to be exposed to asbestos shall be provided in order significantly to contribute to reducing the risks related to such exposure.

8.37 General OHS requirements for the workplace

To safeguard the safety and health of workers, the contractor shall see to it that:

- (a) traffic routes to emergency exits and the exits themselves shall be kept clear at all times,
- (b) technical maintenance of the workplace and of the equipment and devices shall be carried out and any faults found which are liable to affect the safety and health of workers shall be rectified as quickly as possible,
- (c) the workplace and the equipment and devices shall be regularly cleaned to an adequate level of hygiene,
- (d) safety equipment and devices intended to prevent or eliminate hazards shall be regularly maintained and checked.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 126/207

8.38 Requirements for the Code of Conduct (CoC)

The Code of Conduct is part of mitigation measures to deal with environmental and social risks related to the Site Specific ESIA/ESMP for the construction and installation services.

All personnel engaged in the execution of the Contract, including staff, labor and other employees of the Contractor and of each Subcontractor, and any other personnel assisting the Contractor in the execution of the Contract, are referred to as Contractor's personnel.

This Code of Conduct identifies the behavior that we require from the Contractor's Personnel employed for the execution of the construction and installation services in the construction site (or other places in the country where the site is located).

Workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

Contractor's Personnel employed for the execution of the construction and installation services at the site (or other places in the country where the site is located) shall:

1. carry out his/her duties competently and diligently;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's and Subcontractor's personnel and any other person;
3. maintain a safe working environment including by:
 - (a) ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - (b) wearing required personal protective equipment;
 - (c) using appropriate measures relating to chemical, physical and biological substances and agents; and
 - (d) following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 127/207

8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation and Abuse, and Sexual Harassment (SH);
11. report violations of this Code of Conduct; and
12. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.
13. not engaged in any form of Traffic in Persons (TiP) with contractor's and subcontractor workers or community. If this aspect occurred Contractor shall terminate the contract and report to State Authority accordingly and to Employer. Contractor shall include this provision in the Employment Contracts;
14. not engaged in using drugs or other psychotropic chemicals and using medical syringes or other devices which can spread HIV/AIDS.

8.39 Requirements regarding behaviors constituting sexual exploitation & abuse (SEA)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors.

Examples of sexual exploitation and abuse include, but are not limited to:

1. A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g. cooking and cleaning) in exchange for sex.
2. A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
3. A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
4. A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favor.
5. A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

8.40 Requirements regarding behaviors constituting sexual harassment (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors.

Examples of sexual harassment include, but are not limited to:

1. A Contractor's Personnel comment on the appearance of another Installation Services Personnel (either positive or negative) and sexual desirability.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 128/207

2. When a Contractor's Personnel complains about comments made by another Contractor's Personnel on his/her appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
3. Unwelcome touching of a Contractor's Personnel or Employer's Personnel by another Contractor's Personnel.
4. A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly.

This can be done in either of the following ways:

- (a) Contact [*enter name of the Contractor's Social Expert with relevant experience in handling sexual exploitation, sexual abuse and SH cases, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [] or by telephone at [] or in person at []; or
- (b) Call [] to reach the Contractor's hotline (*if any*) and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

Any violation of this Code of Conduct by the Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities of the Republic of Moldova.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend.

I understand that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor's contact person(s) with relevant experience*] requesting an explanation.

Name of Contractor's Personnel: [insert name] Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 129/207

8.41 Requirements for Work Involving Electrical Hazards

8.41.1 General

The Contractor shall comply with requirements for work involving electrical hazards⁴³ such as the electrical safety-related work practices, assessments, precautions, and procedures when an electrically safe work condition cannot be established.

Safety-related work practices shall be used to safeguard employees from injury while they are exposed to electrical hazards from electrical conductors or circuit parts that are or can become energized.

When energized electrical conductors and circuit parts operating at voltages equal to or greater than 50 volts are not put into an electrically safe work condition, and work is performed the following requirements shall apply:

- Only qualified and competent persons shall be permitted to work on electrical conductors or circuit parts that have not been put into an electrically safe work condition;
- An energized electrical work permit shall be completed;
- A shock risk assessment shall be performed by the Contractor;
- An arc flash risk assessment shall be performed by the Contractor.

8.41.2 Energized Electrical Work Permit

When work is performed, an energized electrical work permit shall be required and documented under any of the following conditions:

- (1) When work is performed within the restricted approach boundary
- (2) When the employee interacts with the equipment when conductors or circuit parts are not exposed but an increased likelihood of injury from an exposure to an arc flash hazard exists.

The work permit shall include, but not be limited to, the following items:

- (1) Description of the circuit and equipment to be worked on and their location
- (2) Description of the work to be performed
- (3) Justification for why the work must be performed in an energized condition
- (4) Description of the safe work practices to be employed
- (5) Results of the shock risk assessment
 - a. Voltage to which personnel will be exposed
 - b. Limited approach boundary
 - c. Restricted approach boundary
 - d. Personal and other protective equipment required by this standard to safely perform the assigned task and to protect against the shock hazard
- (6) Results of the arc flash risk assessment

⁴³ <https://www.osha.gov/electrical>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 130/207

- a. Available incident energy at the working distance or arc flash PPE category
 - b. Personal and other protective equipment required by this standard to protect against the arc flash hazard
 - c. Arc flash boundary
- (7) Means employed to restrict the access of unqualified persons from the work area
- (8) Evidence of completion of a job briefing, including a discussion of any job-specific hazards
- (9) Energized work approval (authorizing or responsible management, safety officer, or owner, etc.) signature(s)

8.41.3 Shock Risk Assessment

A shock risk assessment shall be performed:

- (1) To identify shock hazards;
- (2) To estimate the likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health;
- (3) To determine if additional protective measures are required, including the use of PPE.

The estimate of likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health shall take into consideration all of the following:

- (1) The design of the electrical equipment
- (2) The electrical equipment operating condition and the condition of maintenance.

If additional protective measures are required, the Contractor shall be selected and implemented according to the hierarchy of risk control additional protective measures include the use of PPE, the following shall be determined:

- (1) The voltage to which personnel will be exposed;
- (2) The boundary requirements;
- (3) The personal and other protective equipment required by this standard to protect against the shock hazard.

The results of the shock risk assessment shall be documented and submitted to the MEPIU and Moldelectrica. The Beneficiary Moldelectrica shall revise the document and shall be issued the permit to work to Contractor.

8.41.4 Shock Protection Boundaries

The shock protection boundaries identified as limited approach boundary and restricted approach boundary shall be applicable where personnel are approaching exposed energized electrical conductors or circuit parts.

1. Approach by Unqualified Persons



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 131/207

No unqualified person shall be permitted to approach nearer than the limited approach boundary of energized conductors and circuit parts.

2. Working at or Close to the Limited Approach Boundary

Where one or more unqualified persons are working at or close to the limited approach boundary, the alerting methods or safety barriers shall be applied to advise the unqualified person(s) of the electrical hazard and warn him or her to stay outside of the limited approach boundary.

3. Entering the Limited Approach Boundary

Where there is a need for an unqualified person(s) to cross the limited approach boundary, a qualified person shall advise the unqualified person(s) of the possible hazards and continuously escort the unqualified person(s) while inside the limited approach boundary. Under no circumstance shall unqualified person(s) be permitted to cross the restricted approach boundary.

4. Restricted Approach Boundary

No qualified person shall approach or take any conductive object closer to exposed energized electrical conductors or circuit parts than the restricted approach boundary, unless one of the following conditions applies:

- (1) The qualified person is insulated or guarded from energized electrical conductors or circuit parts operating at 50 volts or more. Insulating gloves and sleeves are considered insulation only with regard to the energized parts upon which work is performed.
- (2) The energized electrical conductors or circuit parts are insulated from the qualified person and from any other conductive object at a different potential.

8.41.5 Equipment Labeling

Electrical equipment such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling units and that are likely to require examination, adjustment, servicing, or maintenance while energized shall be marked with a label containing all the following information:

- (1) Nominal system voltage
- (2) Arc flash boundary
- (3) At least one of the following:
 - a. Available incident energy and the corresponding working distance, or the arc flash PPE category for the equipment, but not both
 - b. Minimum arc rating of clothing;
 - c. Site-specific level of PPE.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 132/207

8.41.6 Personal and Other Protective Equipment

Employees exposed to electrical hazards when the risk associated with that hazard is not adequately reduced by the applicable electrical installation requirements shall be provided with, and shall use, protective equipment that is designed and constructed for the specific part of the body to be protected and for the work to be performed.

Protective equipment shall be maintained in a safe, clean, and reliable condition and in accordance with manufacturers' instructions. The protective equipment shall be visually inspected before each use. Protective equipment shall be stored in a manner to prevent damage from physically damaging conditions and from moisture, dust, or other deteriorating agents.

When an employee is working within the restricted approach boundary, the worker shall wear PPE. When an employee is working within the arc flash boundary, he or she shall wear protective clothing and other PPE. All parts of the body inside the arc flash boundary shall be protected.

When arc-rated clothing is worn to protect an employee, it shall cover all ignitable clothing and shall allow for movement and visibility.

Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with energized electrical conductors or circuit parts or from flying objects resulting from electrical explosion.

Employees shall wear nonconductive protective equipment for the face, neck, and chin whenever there is a danger of injury from exposure to electric arcs or flashes or from flying objects resulting from electrical explosion. If employees use hairnets or beard nets, or both, these items shall be arc rated.

Eye Protection. Employees shall wear protective equipment for the eyes whenever there is danger of injury from electric arcs, flashes, or from flying objects resulting from electrical explosion.

Hearing Protection. Employees shall wear hearing protection whenever working within the arc flash boundary.

Body Protection. Employees shall wear arc-rated clothing wherever there is possible exposure to an electric arc flash above the threshold incident energy level for a second-degree burn [1.2 cal/cm² (5 J/cm²)].

Hand and Arm Protection. Employees shall wear rubber insulating gloves with leather protectors where there is a danger of hand injury from electric shock due to contact with exposed energized electrical conductors or circuit parts. Employees shall wear rubber insulating gloves with leather protectors and rubber insulating sleeves where there is a danger of hand and arm



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 133/207

injury from electric shock due to contact with exposed energized electrical conductors or circuit parts. Rubber insulating gloves shall be rated for the voltage for which the gloves will be exposed. Rubber insulating gloves shall be permitted to be used without leather protectors, under the following conditions:

- (1) There shall be no activity performed those risks cutting or damaging the glove.
- (2) The rubber insulating gloves shall be electrically retested before reuse.
- (3) The voltage rating of the rubber insulating gloves shall be reduced by 50 percent for class 00 and by one whole class for classes 0 through 4.

Arc Flash Protection. Hand and arm protection shall be worn where there is possible exposure to arc flash burn. The apparel shall be required for protection of hands from burns.

Maintenance and Use. Electrical protective equipment shall be maintained in a safe, reliable condition. Insulating equipment shall be inspected for damage before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test, along with the inspection. The top of the cuff of the protector glove shall be shorter than the rolled top of the cuff of the insulating glove.

Periodic Electrical Tests. Rubber insulating equipment shall be subjected to periodic electrical tests. Test voltages shall be in accordance with applicable laws and standards.

8.41.7 Alerting Techniques

Safety Signs and Tags

Safety signs, safety symbols, or tags shall be used where necessary to warn employees about electrical hazards that might endanger them. Such signs and tags shall meet the requirements of applicable national and international codes and standards.

Barricades

Barricades shall be used in conjunction with safety signs where it is necessary to prevent or limit employee access to work areas containing energized conductors or circuit parts. Conductive barricades shall not be used where it might increase the likelihood of exposure to an electrical hazard. Barricades shall be placed no closer than the limited approach boundary.

Where the arc flash boundary is greater than the limited approach boundary, barricades shall not be placed closer than the arc flash boundary.

Attendants

If signs and barricades do not provide sufficient warning and protection from electrical hazards, an attendant shall be stationed to warn and protect employees. The primary duty and responsibility



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 134/207

of an attendant providing manual signaling and alerting shall be to keep unqualified employees outside a work area where the unqualified employee might be exposed to electrical hazards. An attendant shall remain in the area as long as there is a potential for employees to be exposed to the electrical hazards.

Look-Alike Equipment

Where work performed on equipment that is de-energized and placed in an electrically safe condition exists in a work area with other energized equipment that is similar in size, shape, and construction, one of the alerting methods shall be employed to prevent the employee from entering look-alike equipment.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 135/207

CHAPTER 9. CAPACITY BUILDING

9.1 General

The World Bank Group Strategy⁴⁴ sets out the corporate goals of ending extreme poverty and promoting shared prosperity in all its partner countries. Securing the long-term future of the planet, its people and its resources, ensuring social inclusion, and limiting the economic burdens on future generations will underpin these efforts. The two goals emphasize the importance of economic growth, inclusion and sustainability - including strong concerns for equity.

According to definition, the Capacity-building is defined as the process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world.

An essential ingredient in capacity-building is transformation that is generated and sustained over time from within; transformation of this kind goes beyond performing tasks to changing mindsets and attitudes. The sustainable development includes targets for capacity-building, including increasing technology and innovation in least developed countries and improving data collection and monitoring for the achievement of the SDGs themselves. Universities in particular can serve as centers of capacity-building through research, innovation and data collection and analysis.

9.2 Capacity building for construction phase

The implementation of the Site Specific ESIA/ESMP requires specific knowledge and competence for Contractor and subcontractor that shall be engaged in the upgrading the Chisinau SS.

The contractor shall ensure that each worker receives adequate safety and health training, in particular in the form of information and instructions specific to his workstation or job:

- (i) on recruitment,
- (ii) in the event of a transfer or a change of job,
- (iii) in the event of the introduction of new work equipment or a change in equipment, and
- (iv) in the event of the introduction of any new technology.

The training shall be adapted to take account of new or changed risks, and repeated periodically if necessary.

Respectively, the upgrade the Chisinau SS shall support relevant trainings on knowledge and information on topics such as the Site Specific ESIA/ESMP implementation, ES performances

44

[https://openknowledge.worldbank.org/bitstream/handle/10986/16093/32813_ebook.pdf?sequence=#:~:text=The%20World%20Bank%20Group%20\(WBG,goals%20in%20a%20sustainable%20manner.](https://openknowledge.worldbank.org/bitstream/handle/10986/16093/32813_ebook.pdf?sequence=#:~:text=The%20World%20Bank%20Group%20(WBG,goals%20in%20a%20sustainable%20manner.)

reporting, etc. The capacity building and training plan for construction stage is presented in Table 9-1 below.

Table 9-1: Capacity building and training program for Construction Phase

#	Training subject	Time and duration	Recipients	Organizer	Cost
A	ENVIROMENTAL AND SOCIAL				
1	Induction training for the provision of the Site Specific ESIA/ESMP	Before starting the construction works	Contractor/ Subcontractor	Contractor	Contractor cost
2	Induction for visitors, supply chain, community, etc.	Before starting the construction works	Contractor/ Subcontractor	Contractor	Contractor cost
3	Induction regarding requirements of the Chance Find Procedure	Before starting excavation works	Contractor/ Subcontractor	Contractor	Contractor cost
4	Waste management requirements	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
5	Hazardous waste management (used oil, ACMs (if any), SF ₆)	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
6	Social & Gender requirement at the working place	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
7	HR policy requirements (Child labor, non-discrimination and equal opportunity, etc.)	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
8	The provision of the Social Management Plan	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
9	TiP, SH, HIV/AIDS and STD requirements	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost ⁴⁵
10	Traffic Management Plan	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
11	Community HS Plan	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
12	Installation of devices for birds	After towers installation	Contractor/ Subcontractor	Contractor	Contractor cost
13	Nests installation on towers	After towers installation	Contractor/ Subcontractor	Contractor	Contractor cost
B	OCCUPATIONAL HEALTH AND SAFETY				
14	General Health and Safety Plan requirements	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
15	Excavation works/Confined space	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost

⁴⁵ The Contractor shall select an external service provider based on contract.

#	Training subject	Time and duration	Recipients	Organizer	Cost
16	Working at heights on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
17	Electrical requirements on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
18	Wear of PPE on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
19	Noise and vibration on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
20	Crane & forklift requirement on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
21	Requirements for smoking and drinking on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost
22	Electrical requirements on site	Before starting construction works and periodically	Contractor/ Subcontractor	Contractor	Contractor cost

The contractor shall ensure that subcontractor workers engaged in work have in fact received appropriate instructions regarding OHS risks during their activities in his undertaking and /or establishment. Workers' representatives with a specific role in protecting the safety and health of workers shall be entitled to appropriate training. The training must take place during working hours or in accordance with national practice either within or outside the undertaking and/or the establishment.

9.3 Capacity building for operational phase

In order to achieve the World Bank Goals, emphasizing the economic growth, inclusion and sustainability, the Beneficiary shall implement the present Capacity Building Plan, presented in the Table 9-2.

The implementation of the Site Specific ESIA/ESMP specific for operational phase requires specific knowledge and competence for the Beneficiary personnel to operate and maintain the new equipment of the Chisinau SS.

The Beneficiary Moldelectrica shall ensure that workforce receives adequate OHS training, in conformity with applicable Republic of Moldova and the World Bank specific for the new equipment installed on the Chisinau SS (i) on recruitment, (ii) in the event of a transfer or a change of job, (iii) in the event of the introduction of new work equipment or a change in equipment, and (iv) in the event of the introduction of any new technology.

The training shall be adapted to take account of new or changed risks, and repeated periodically if necessary. The plan for capacity building and training plan for operational stage is presented in Table 9-2 below.

Table 9-2: Capacity building and training program for Operational Phase

#	Training subject	Time and duration	Recipients	Organizer	Cost, Euros
1	Requirements of the international standards (ISO 9001, ISO 14001, ISO 45001)	2024 3 days	Moldelectrica	MEPIU/ Moldelectrica	TBI
2	World Bank ES Standards (include biodiversity protection, etc.)	2024 2 days	Moldelectrica	MEPIU/ Moldelectrica	TBI
3	Risk Assessment Procedure (the new Law for ESIA procedure (in force from October 23)	2024 2 days	Moldelectrica	MEPIU/ Moldelectrica	TBI
4	Social and Gender aspects including SH, SEA, TiP, STD, HIV/AIDS, etc.	2024 2 days	Moldelectrica	MEPIU/ Moldelectrica	TBI
5	Hazardous waste management (SF ₆ , PCBs, etc.)	2024 2 days	Moldelectrica	MEPIU/ Moldelectrica	TBI
6	Maintenance & operation of the new equipment	2024	Moldelectrica	Contractor	-
7	Monitoring and measurements of hazardous pollutants (SF ₆ , PCBs, halons, etc.) and reporting procedure to Environmental Agency	2024	Moldelectrica	MEPIU/ Moldelectrica	TBI
8	Balloons with SF ₆ storage, handling and other safety requirements (confined space)	2024	Moldelectrica	Moldelectrica	TBI
9	Monitoring and measurements of the SF ₆ inside of the Chisinau SS	2024	Moldelectrica	Moldelectrica	TBI
10	SF ₆ handling and using PPE	2024	Moldelectrica	Moldelectrica	TBI
11	Measurements devises for leak detection for SF ₆	2024	Moldelectrica	Moldelectrica	TBI
Total⁴⁶					TBI

⁴⁶ Here shall be included the price for event location at the hotel, meal, materials, etc.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 139/207

CHAPTER 10: PERFORMANCE EVALUATION

10.1 Monitoring, measurement, analysis and performance evaluation

10.1.1 General

Environmental and social monitoring and measurement is necessary to track the performance of the mitigation measures for the new equipment of the Chisinau SS. It aims to ensure that the project is functioning within the limits of the environmental and social assessment and is compliant with legislative and regulatory requirements.

The monitoring and measurement program outlined below covers the environmental, social and occupational health and safety conditions of the new equipment of the Chisinau SS. It will provide sufficient information to identify conditions which require corrective action or for which additional impact analysis and mitigation measures may be required. The monitoring program is based on the environmental and social impacts that were predicted and the mitigation measures that were identified.

The costs estimates include cost estimates for the purchase of monitoring equipment or services and other monitoring operational costs.

An ESMP is a living document that is periodically revised to reflect the current understanding of site conditions, with the continued growth of the knowledge base throughout the life of the project. Monitoring programs must also be revised and updated to generate the most relevant data and information to characterize evolving environmental and social as well as environmental and social program performance.

Implementation of these programs will provide the data and information needed to identify, anticipate, and further mitigate the changing environmental and social conditions in the Chisinau SS over time. The monitoring program plays an important role in achieving sustainability and transparency.

Each of the monitoring programs shall be the responsibility of key management personnel defined in the Monitoring Plan table. They will have the authority to adjust and modify operating conditions should the monitoring outcomes identify that such corrective actions are warranted.

10.1.2 Monitoring and measurement during Construction Phase

The following activities will be continuously monitored during construction phase:

- Implementation of approved Detailed Design for the Chisinau SS;
- Implementation of the ESIA/ESMP for the Chisinau Substation specific for com. Bacioi;



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 140/207

- Implementation of the Stakeholders Engagement Plan (SEP) specific for the com. Bacioi;
- Implementation of the Code of Conduct;
- Implementation of the Health and Safety Plan;
- Implementation of the Community Health and Safety Plan and Traffic Management Plan;

10.1.3 Monitoring and measurement during Operation Phase

The operation of the new equipment of the Chisinau SS must be regularly monitored during the operational phase to be in line with the requirements and procedure stipulated in the applicable Laws of the Republic of Moldova.

As it was already mentioned the measures are standard ones and will cover: O&M, energy efficiency, biodiversity, waste management, OHS, etc.

In this context, during the operational phase the key institutions to which the ME will enter into juridical relation with are:

- Ministry of Energy;
- Environmental Agency/Environmental Protection Inspectorate (regular inspections of compliance with the environmental standards);
- National Agency for Public Health (regular medical control for workers);
- Labor Inspection (compliance with the OHS standards);
- State Department for Emergency Situations (fire protection measures and training);
- National Archaeological Agency and the Ministry of Culture, etc.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 141/207

Table 10-1: Monitoring and Measurement Plan for Construction Stage

WHAT parameter is to be monitored	WHERE is the parameter to be monitored	HOW is the parameter to be monitored	WHEN is the parameter to be monitored	WHO is to monitor the parameter	Cost	WHOM to report to (decision making institutions)
HEALTH, SAFETY AND ENVIRONMENT (DOCUMENTS AND RECORDS)						
Construction Authorization	Construction Site (CS)	To be present on CS	Before starting construction works (CW)	MEPIU, CSE, LPA, SLI	ME	MEPIU (MPR) to MoEn QPR to WB
Approved corridor for 400 kV	Receive endorsement approval from stakeholders	To be submit to stakeholders for approval	Before DD is approved by state authorities of RM	CSE, MEPIU, ME	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Approved Detailed Design & Site Specific ESIA/ESMP	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA SLI	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Risk Register	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
CESMP	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
COHSP	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
CoC	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Communication procedure (GRM for workforce)	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Social & Gender Plan	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
TiP, HIV/AIDS, STD, SH Plan	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
HSSE Training Plan (for direct and indirect workers)	Construction Site	Signing the minutes of training on CS	Before Work on site	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Emergency Preparedness and Response Plan	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Community HSP	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Traffic Management Plan	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Information Board on Site with GRM	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, LPA	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Daily Log	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 142/207

WHAT parameter is to be monitored	WHERE is the parameter to be monitored	HOW is the parameter to be monitored	WHEN is the parameter to be monitored	WHO is to monitor the parameter	Cost	WHOM to report to (decision making institutions)
List of workers on site	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Visitors Log	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Accident Log and reporting procedure	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, SLI	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Emergency & First Aids kits on site	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
Environmental collection kits (spills & leaks)	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, EPI	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
General working condition on site (camp site, sanitation accommodation, resting rooms, washrooms, toilets, canteen, etc.)	Construction Site (CS)	To be present on CS	Before starting construction works	MEPIU/ME CSE, SLI	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB
ENVIRONMENTAL PERFORMANCES						
Excavation	Construction Site	Field inspection	Before starting excavation works	MEPIU, ME, CSE, NAA	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Protection of black fertile soil	Construction Site	Field inspection	When deemed necessary	MEPIU, ME, CSE, LPA, EPI	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Tracks Oil spills on soil	Construction Site	Field inspection	When deemed necessary	MEPIU, ME, CSE, EPI	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
PE Cover of excavated soil piles	Construction Site	Field inspection	When deemed necessary	MEPIU, ME, CSE, EPI	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Noise (measure the noise level)	Construction Site	Measurement of dB level on CS	During the work of heavy machinery	MEPIU, ME, CSE, NAPH	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Ozon (O ₃)	Construction Site	Measurement of Ozon concentration	After OHTL in operation	MEPIU, ME, CSE, NAPH	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Electro-magnetic field (EMF)	Construction Site	Measurement of EMF	After OHTL in operation	MEPIU, ME, CSE, NAPH	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Dust (presence of sprays and tracks hauls cover liner)	Construction Site	Measurement of quantity of water used for dust suppressed on CS	During the work of heavy machinery	MEPIU, ME, CSE, NAPH, EPI	Contractor costs	MEPIU (MPR) to MoEn QPR to WB
Waste Management	Construction Site	Check of permits for dumping the waste at the local authorized damp site	Before work starts and during the work when deemed necessary.	MEPIU, ME CSE, EPI	Contractor's costs	MEPIU (MPR) to MoEn QPR to WB



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 143/207

WHAT parameter is to be monitored	WHERE is the parameter to be monitored	HOW is the parameter to be monitored	WHEN is the parameter to be monitored	WHO is to monitor the parameter	Cost	WHOM to report to (decision making institutions)
Hazardous waste (PCBs) management (if any)	Construction Site	Presence of PPE (respirators, gloves, glasses, coverall)	Periodically (ones in a month)	MEPIU/ME CSE, EPI, SLI	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Consumption of resources	Construction Site	Measure the consumption	Monthly	MEPIU/ME CSE, EPI, SLI	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
SOCIAL PARAMETERS						
Workforce Committee (GRM)	Construction Site	Boxes to be installed on construction site	Ensure that box is installed and safety condition	MEPIU, ME, CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Number of meetings, seminar, booklets, etc. on social mitigating risks (CoC, TiP, SH, HIV & STD) conducted with workers	Construction Site	Training reports	Monthly	MEPIU CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Numbers of grievances received from construction site personnel	Construction Site	Complaints	Monthly	MEPIU, CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Medical control of personnel	Construction Site	Surveillance medical report, Invoice	At the starting works/ Periodically	MEPIU, ME CSE, NAPH EA/EPI	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
OCCUPATIONAL HEALTH AND SAFETY						
PPE	Construction Site	Workers must wear PPE	Every day	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Electrical special PPE	Construction Site	Workers must wear PPE	Every day	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Crane and forklift	Construction Site	O&M for crane and forklift	Before starting construction work	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Weather condition	Construction Site	Special PPE for cold period and water for hot season	Depends of weather conditions	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Work Permits	Construction Site	Obtain WP from ME	Before starting construction work	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
OHS Signs	Construction Site	Install OHS signs on site	Before starting construction work	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Smoking	Construction Site	Install a smoking place	Before starting construction work	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Cleanness	Construction Site	Site Inspection	Before starting construction work and regularly	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Firefighting equipment	Construction Site	To be present on site Site Inspection	Before starting construction work and regularly	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
First aid kit	Construction Site	To be present on site Site Inspection	Before starting construction work and regularly	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB
Monitoring and measurement equipment (MEE)	Construction Site	To be present on site Site Inspection	Before starting construction work and regularly	MEPIU, ME CSE	Contractor's costs	MEPIU (MPR) to MoEn, QPR to WB



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 144/207

Table 10-2: Monitoring and Measurement Plan for Operational Stage

WHAT parameter is to be monitored	WHERE is the para- meter to be monitored	HOW is the parameter to be monitored	WHEN is the parameter to be monitored	WHO is to monitor the parameter	Cost	WHOM to report to (decision making institutions)
ENVIRONMENTAL						
Establishment an ESMS	ME	Compliance with ES applicable national laws and international requirements (if any)	Monthly / Yearly	Company's designated and technical staff	Company's costs	International Companies
Energy consumption/ transportation	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	NAER Energy Supplier
Dead birds under around Chisinau SS	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	Env. Agency, EPI
Generated solid wastes	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Generated hazardous wastes	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Ozon generation	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Electro-magnetic field (EMF)	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Generated liquid wastes	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Spare parts	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	MIRD
Equipment Monitoring & measurement (EMM)	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	Moldova Standard
Monitoring and measurement (MM) of working environment parameters	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA/EPI, NAPH
MM of pollutant release into the atmosphere (SF ₆ , etc.)	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	EA, EPI
Equipment maintenance	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	MIRD
Emergency situations	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	Firefighting department
Equipment safety	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's technical staff	Company's costs	Technical Surveillance Agency
Vehicles maintenance	ME	Compliance with road applicable laws	Monthly / Yearly	Company's staff	Company's costs	Specialized Company
SOCIAL						
Compliance with ES requirements	ME	Compliance with ES applicable laws	Yearly	Company's technical staff	Company's costs	EA/EPI NAPH, SLI
Human Resources Policy	ME	Compliance with HR applicable laws	Monthly / Yearly	Company's HR staff	Company's costs	EA/EPI NAPH, SLI
CoC	ME	Compliance with ES applicable laws	Monthly / Yearly	Company's HR staff	Company's costs	EA/EPI NAPH, SLI
Health & Safety Plan	ME	Compliance with HS applicable laws	Monthly / Yearly	Company's HS staff	Company's costs	EA/EPI NAPH, SLI



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 145/207

WHAT parameter is to be monitored	WHERE is the parameter to be monitored	HOW is the parameter to be monitored	WHEN is the parameter to be monitored	WHO is to monitor the parameter	Cost	WHOM to report to decision making institutions)
Medical surveillance / control of personnel	ME	Compliance with social applicable laws	Monthly / Yearly	Company's staff	Company's costs	NAPH, SLI
First aid	ME	Compliance with social applicable laws	Monthly / Yearly	Company's staff	Company's costs	NAPH, SLI
Emergency situation	ME	Compliance with social applicable laws	Monthly / Yearly	Company's staff	Company's costs	NAPH, SLI
Social facilities (changing rooms, toilets, bathrooms, canteen, etc.)	ME	Compliance with social applicable laws	Monthly / Yearly	Company's staff	Company's costs	NAPH, SLI

10.1.4 Monitoring the compliance with ES requirements

10.1.4.1 Compliance with requirements of WB

The Detailed Design shall be approved by ME and MEPIU and shall receive non-objection from the World Bank.

At the detailed design stage, an Environmental and Social Impact Assessment (ESIA) proportionate to the potential risks and impacts of the Chisinau SS and commensurate with its nature, size and location shall be carried out according to World Bank's OP 4.01 Environmental Assessment and identified high risks shall be part of ESMP.

Additionally, at the detailed design stage the Stakeholder Engagement Plan (SEP) shall be revised and map engagement during project implementation and external reporting.


10.1.5 Compliance with applicable RM requirements

10.1.5.1 Construction Permit issuance

The construction permit/authorization is issued by the LPA based on the Beneficiary application, which indicates the location of the construction site, within 30 working days from the date of its registration.

The following documents will be attached to the request:

- The Urbanism Certificate for Design issued by the Local Public Authority;
- Approved Detailed Design with the report on the project verification;
- Contract on the author's supervision, signed by the applicant and the Contractor;
- Notice from the National Council of Historical Monuments attached to the Ministry of Education on the approval of the execution design, in case of designing interventions at history,

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 146/207
---	--	----------------------

art or architecture monuments or in-built areas registered in the Monuments Register of the Republic of Moldova, protected by the state;

- The archaeological discharge certificate issued by the National Archaeological Agency;
- the Environmental Agreement issued by the Environmental Agency.

10.2 Internal audit

The Construction Supervision Engineer shall conduct internal audits at planned intervals to provide information to MEPIU on whether the Site Specific ESIA/ESMP: (i) CESMP is developed by Contractor by taking into consideration all requirements from Site Specific ESIA/ESMP and (ii) is effectively implemented and maintained by Contractor and Subcontractors.

10.3 Management Review

For the Construction phase, the Construction Supervision Company shall be responsible for environmental and social performances reporting to MEPIU on the implementation of the requirements established in the present Site Specific ESIA/ESMP.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 147/207

CHAPTER 11: EVALUATION OF COMPLIANCE WITH REQUIREMENTS OF SITE SPECIFIC ESMP

11.1 General

Non-conformity represents non-fulfillment of requirements of the present document or occurrence arising out of, or in the course of, work that could or does result in injury and ill health. Non-conformity represents also incidents and accidents.

The provisions of the site specific ESIA/ESMP shall be implemented on construction site by the Contractor and the Construction Supervision Engineer shall monitor the implementation process of the present document in an open and transparent manner and monitoring and measurement performances shall be reported monthly to MEPIU.

The provisions of the site specific ESIA/ESMP shall be implemented during operational phase by the Operator/Beneficiary and State Supervision Agency (Environmental, Health and Safety, Social, etc.) shall monitor the implementation process of the present issued legal permits (Authorizations, Permits, Notices, etc.) in an open and transparent manner and monitoring and measurement performances shall be reported monthly to MEPIU.

Non-compliance with provisions established in the site specific ESMP or non-conformity (ies) shall be recorded by the Construction Supervision Engineer in the Non-conformity Report. Non-conformity Report shall establish necessary correction actions and take actions to control and correct non-conformity (ies).

11.2 Incidents

11.2.1 Incidents occurring during construction phase

Incident means occurrence arising out of, or in the course of, work that could or does result in injury and ill health. An incident where injury and ill health occurs is sometimes referred to as an "accident". An incident where no injury and ill health occurs, but has the potential to do so, may be referred to as a "near-miss", "near hit" or "close call".

Although there can be one or more nonconformities related to an incident, an incident can also occur where there is no nonconformity.

Any Incident occurring on the Construction site of the Project or caused by the Construction activities shall be reported by the Contractor/ subcontractor to the CSE and MEPIU as soon as possible and not later than 24 hours after the incident occurred.

The Incident Report form is presented in the Annex 1.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 148/207

11.2.1 Incidents occurring during operational phase

The operator or beneficiary shall comply with applicable laws of Republic Moldova and legal permit issue by the State Supervision Agency based on its ESMS.

11.3 Nonconformity and corrective action

11.3.1 Identified non-conformity during construction phase

Nonconformity means non-fulfilment of a requirement established in the present Site Specific ESIA/ESMP. Nonconformity relates to requirements established in this document for construction stage shall be kept under control and corrective actions shall be implemented on site.

The nonconformity and corrective action process are a reactive process, in that it is triggered after a noncompliance with requirements established in the present document. In essence, the process uses the principles of root cause analysis. A basic approach to problem solving is “cause” and “effect”, and it is the cause that needs to be eliminated. Action taken shall be appropriate and proportionate to the impact of the nonconformity. As part of the corrective action process, the effectiveness of action taken must be checked to ensure it is effective.

Corrective action means to eliminate the cause(s) of a nonconformity or an incident and to prevent recurrence. The main aim of the corrective action process, described in the present document, is to eliminate the noncompliance causes of actual problems so as to avoid recurrence of those problems.

The Nonconformity and Corrective Actions Report form is presented in the Annex 2.

11.3.2 Identified non-conformity during operational phase

Nonconformity relates to requirements established in this document for managing environmental and social aspect during operational stage are responsibility of the beneficiary. The Company shall establish, implement and maintained an ESMS based on national and international requirements.

Corrective action means to eliminate the cause(s) of a nonconformity or an incident and to prevent recurrence, and reporting the State Supervision Agency shall be kept under control by the beneficiary based on requirements of its own ESMS. The main aim of the corrective action process is to eliminate the noncompliance causes of actual problems so as to avoid recurrence of those problems.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 149/207

The nonconformity and corrective action process are a reactive process, in that it is triggered after a noncompliance with requirements established in the present document. In essence, the process uses the principles of root cause analysis. A basic approach to problem solving is “cause” and “effect”, and it is the cause that needs to be eliminated. Action taken shall be appropriate and proportionate to the impact of the nonconformity. As part of the corrective action process, the effectiveness of action taken must be checked to ensure it is effective.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 150/207

CHAPTER 12. INSTITUTIONAL ARRANGEMENTS

12.1 Institutional responsibilities

The overall responsibility for monitoring the Project implementation is the Ministry of Energy (MoEn), and shall ensure that role and responsibilities are defined and with sufficient resources for project implementation accepted for the Bank and Government.

12.2 Project Management Unit

The Ministry of Energy (MoEn)⁴⁷ is the central specialized body, which promotes state policy in the field of infrastructure and regional development and operates in accordance with the Constitution and Laws of the Republic of Moldova, Parliamentary Decisions, Acts of the President of the Republic of Moldova, Government Decisions and Orders, as well as other normative acts.

The Ministry of Energy aims to create an efficient, sustainable, and competitive energy sector, which will ensure the security of the country's energy supply. To achieve this, MoEn focuses on the following objectives: (i) Development of the power sector, (ii) Development of the thermal energy sector, (iii) Development of the natural gas and petroleum products sector and (iv) Promoting energy efficiency and capitalizing on renewable energy sources. The Republic of Moldova must improve and streamline its thermal energy system, develop alternative energy systems, and diversify its natural gas and electricity supply sources.

12.3 Project Implementation Unit

Moldova Energy Projects Implementation Unit (MEPIU)⁴⁸, is an independent, non-profit legal entity established by the Government Decision no. 1276 in December 2000. The task of MEPIU is to ensure the efficient implementation of the projects in the energy sector through their administration, monitoring and coordination in accordance with the Donors'/international financial institutions' requirements.

During its activity MEPIU has implemented various projects, strategically important for the Republic of Moldova, such as Energy Project, Energy II Project (Heating and Electrical Components), "Interconnection gas pipeline between the Natural Gas Transmission System of Romania and the Natural Gas Transmission System of the Republic of Moldova on the Iași (Romania) – Ungheni (Moldova) direction", „Feasibility Study on Synchronous Interconnection of Ukrainian and Moldovan Power Systems to ENTSO-E Continental Europe Power System”,

⁴⁷ Source: <https://midr.gov.md/ro/portofoliu/energie>

⁴⁸ Source: <https://mepiu.md/eng/about-us>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 151/207

“Capacity building to the Ministry of Economy in the area of energy efficiency and renewable energy in Moldova”, Moldova Energy Sector Reform and Efficiency Improvements Project, and has performed many other activities in the energy sector, covering financial, investment and technical aspects.

Currently, MEPIU implements projects related to modernization of the centralized district heating system, diversification of natural gas supply sources, and interconnection of power grids of the Republic of Moldova and Romania.

MEPIU operates in accordance with the legislation in force of the Republic of Moldova, its Statute (Regulations), procedures and standards of the World Bank and other international financing organizations.

12.4 The Beneficiary SE Moldelectrica

The Government Decision no. 1000 of 02.10.2000 "Regarding the creation of state enterprises in the electric energy sector" served as the basis for the formation of the State Enterprise "Moldelectrica" by order of the Ministry of Industry and Energy of the Republic of Moldova no. 92 of October 19, 2000.

The state enterprise "Moldelectrica" is a company specialized in the centralization of operational transport and dispatching services of the energy system of the Republic of Moldova. Within its activity, the Transport System Operator is responsible for two main groups of tasks: (i) electricity transport and (ii) the implementation of a single operative-technological management of the energy system of the Republic of Moldova.

12.5 Construction Supervision Engineer

The main objective of the assignment for the Consultant is to assist the Employer/MEPIU in the administration and supervision of the Design, Supply and Installation Contracts on the construction of a new 400 kV Vulcanesti-Chisinau overhead transmission line, Upgrade of 330 kV Chisinau Substation and extension of 400 kV Vulcanesti Substation with due diligence, to carry out the duties assigned to him in the Contract and provide other services.

Supervising Agencies are responsible for supervising the executing agencies to ensure that they execute the mitigation measures as planned.

The Construction Supervision Engineer hired by MEPIU for daily supervision over the implementation of civil works will be responsible for supervising the timely, proper and reliable implementation of works and measures, as provided by the Site Specific ESIA/ESMPs for the 400 kV OHTL and the Chisinau Substation.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 152/207

MEPIU shall oversee the environmental and social aspects of all activities implemented for 400 kV OHTL and the Chisinau Substation (the component no. 1 and component no. 2 of the Project) to ensure that mitigation measures are designed and implemented properly to prevent and minimize likely adverse environmental and social impacts.

The Construction Supervision Engineer shall also ensure that all necessary agreements and permits are obtained by appropriate contractors from relevant state and local authorities before the construction works are start. MEPIU may request to check if such permits are issued and valid as well as if the ESMP mitigation and monitoring aspects are implemented on the ground during the construction of the 400 kV OHTL and the Chisinau Substation according to applicable the Republic of Moldova environmental and social legislation.

12.6 General Contractor

The General Contractor, during construction phase, shall take the responsibility for physical implementation of mitigation measures provided under the Site Specific ESIA/ESMP, as well as for obtaining all construction activities related permits and agreements in accordance contractual documents and applicable environmental and social legislation of the Republic of Moldova.

The Construction Supervision Company will employ an Environmental Health and Safety (HSE) Manager who will ensure that the Constructor carry out day-to-day implementation of the ESMP in line with the environmental and social clauses included in contractual documents. The Contractor will have to appoint (as it will be required by contract provisions) HSE Offices who will actually organize the process of implementation of mitigation measure on Site, during the Construction Phase.

12.7 Monitoring Supervising Agencies

12.7.1 Roles and responsibilities of the State Supervision Agencies for design phase

Monitoring and supervising agencies are in charge of monitoring the extent of implementation and the effectiveness of the mitigation and enhancement measures and of adjusting the program if needed. Monitoring agencies will be responsible for covering all measures requiring some sort of monitoring by MEPIU/ME.

The organizational layer of the ESMP for monitoring and supervision is presented in figure below.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 153/207

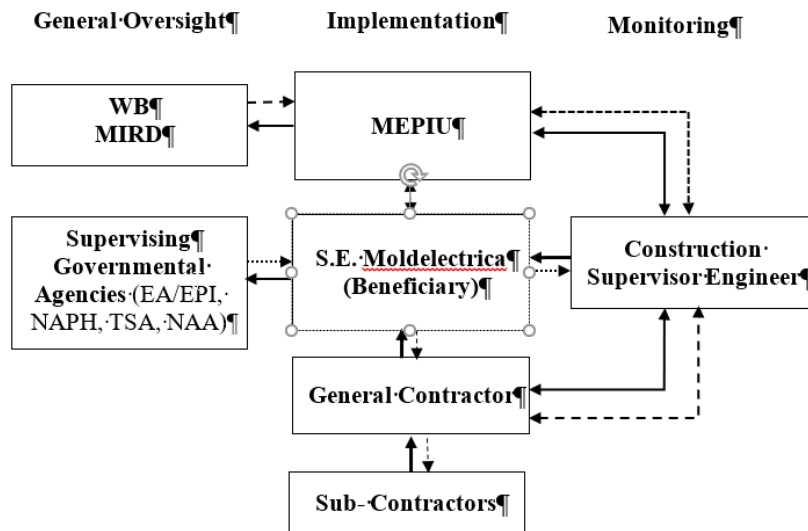


Figure 10-1: Organizational layer of the ESMP
(..... information, → reporting channels)

The state government agencies shall be involved in the monitoring activities, as a part of their mandate, in particular:

1. The Environmental Agency (EA) within the Ministry of Environment, is responsible for assessment of the EIA process and perform state ecological expertise,
2. The Environmental Protection Inspectorate (EPI) and its territorial offices, within the Ministry of Environment, are responsible for the monitoring of the implementation of the provisions established in the Environmental Permit and finally attend at the reception of works completion,
3. The National Agency for Public Health and its territorial offices within the Ministry of Health, are responsible for approval of the Detailed Design & Site Specific ESIA/ESMP,
4. The Technical Surveillance Agency within the MoIRD is responsible for issue the Notice for the design process and finally attend at the reception of works completion.

12.7.2 Roles and responsibilities of the State Supervision Agencies for operational phase

Monitoring and supervising agencies are in charge of monitoring and measurement the extent of implementation and the effectiveness of the mitigation and enhancement measures specific for operational phase based on issued notices, permits, endorsements, etc. The beneficiary is responsible for covering all measures requiring some sort of monitoring stated in the legal document issued by the State Agencies.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 154/207

CHAPTER 13: STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATIONS

13.1 Public Consultations and Disclosure

13.1.1 Public Consultation Meetings

Within the development of the draft site specific environmental and social impact assessment during the detailed design stage for the upgrading the 330/110/35 kV Chisinau Substation, public consultation shall be organized at the Bacioi Commune Council⁴⁹ by inviting the community from the villages Bacioi, Braila, Frumusica and Straisteni and the scope of the public consultation is to ensure that identified environmental and social risks specific for the upgrading process at the Chisinau Substation are provided to the community from the Bacioi Commune. The effective information of the community from the commune Bacioi regarding the identified environmental and social risks is to develop a strong, constructive and responsive relationship that are important for the Site Specific ESIA/ESMP improvement.

The following stakeholder engagement activities have been performed so far:

⁴⁹ Source: <https://bacioi.md/consilieri-locali/>


 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 155/207
---	--	----------------------

Table 13-1: Previous Public Consultation during the pre-construction stage

Periods	Topics	Consultation sessions (No.)	Consulted localities/persons (No.)	Details	Notes
February 25 – March 12, 2021	Prior research in accordance with the GD no. 660/2006	6 (1 online session and 5 sessions with physical participation).	35 representatives of local public authorities from 35 localities along the route of the Vulcanesti-Chisinau OHTL (members of Commission for preliminary assessment for declaring the Project as public utility of national interest).	A commission for preliminary research for the declaration of the project as public utility project of national interest was established through GD no. 2/2021. The commission has voted the necessity to declare the Project as public utility of national interest.	Project description leaflet distributed. On May 12, 2022, the Parliament of the Republic of Moldova adopted Law no. 120 on declaration of public utility of national interest of the construction works for construction of the 400 kV OHTL Vulcanesti - Chisinau & the Vulcanesti Back-to-Back station
May 2022	Declaration of the Project as public utility of national interest, including also the components of the Project, the benefits, the stages of implementation and the GRM at the Project level.	Voted in 2 lectures	The draft law was consulted with: Ministry of Justice Ministry of Finance Ministry of Environment National Anticorruption Centre ANRE IPOT Cadaster Agency	The Parliament of RM adopted the Organic Law no. 120/2022	MoIRD used online platform for consultation process particip.gov.md The Law no. 120/2022 was published in the Official Gazette of Republic of Moldova
June 2022	MEPIU Request District Concilium's to publish Law no. 120/2022 on District Concilium web-page	8 Districts	Ialoveni District Council Hâncești District Council Cimișlia District Council Leova District Council Taraclia District Council ATU Gagauzia The Bacioi Local Council	Not RC informed the community about declaration the Project of national interest	Law was published on Concilium web page



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 156/207

Periods	Topics	Consultation sessions (No.)	Consulted localities/persons (No.)	Details	Notes
May 25 – July 10, 2022	Design development for 400 kV Vulcanesti-Chisinau OHTL, including preliminary soil survey, types of work and affected surface by this survey, procedure for assessing damages and paying compensation for lost crops.	31	31 localities and 200 persons affected by preliminary soil survey, including SIMCs' members (in total, about 300 landowners are affected by the preliminary soil survey).	Information materials were distributed in all localities affected by the Project (announcements on GRM operation and WB's GRS, Poster on GRM operation).	Basic Design (Plans and Profiles were approved by the Construction Supervision Engineer and Moldelectrica.
December 13 - 16, 2022	The Environmental and Social Impact Assessment and Site-Specific ESMP (including general aspects of RAP) for the construction of the 400 kV OHTL Vulcanesti – Chisinau and the Chisinau SS. Information and Consultation of the Law no. 120/2022	8 Districts (Ialoveni, Hincesti, Cimislia, Leova, Cahul, Taraclia, ATU Gagauzia and Commune Bacioi)	138 persons	The informative PCs were organized to inform about the progress of preparing the site-specific ESIA & ESMPs and RAP to the public and also to provide the identified main environmental & social possible impacts and mitigation measures proposed.	Most of the discussions, questions and proposals raised during consultations were linked with the land needs and land acquisition process, mechanism for land valuation and schedule of compensation, restrictions to agricultural land during construction/ operation, health & safety issues regarding OHTL electromagnetic influences, project related job opportunities.
November 23-29, 2023	The ESIA & ESMPs specific for sites for the construction of the 400 kV OHTL Vulcanesti – Chisinau and upgrading the Chisinau SS.	8 Districts (Ialoveni, Hincesti, Cimislia, Leova, Cahul, Taraclia, ATU Gagauzia and Commune Bacioi)	101 persons	The informative PCs were organized based the draft final ESIA & ESMPs Reports specific for sites by providing main ES mitigation measures for risks controlling.	Most of the discussions, questions and proposals raised during consultations were linked with payment for land acquisition process, electromagnetic influences on community health, job opportunity.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 157/207

The public consultation events shall be carried out by MEPIU together with consultants before starting the construction works and with support of LPA based on identified specific environmental and social risks for the upgrading process for the Chisinau Substation. The public consultation process specific for the commune Bacioi is an important instrument for an open and transparent engagement between community from the commune Bacioi and MEPIU.

The public consultation process at the detailed design stage ensures that relevant, understandable and accessible information from the Site Specific ESIA/ESMP are provided to the community from the commune Bacioi. The communication procedure shall generate mutual trust, respect and transparency between MEPIU and community from the commune Bacioi aiming to receive feedback in order to improve the Site Specific ESIA/ESMP and finally the community to be satisfied by the upgrading process inside the Chisinau Substation.

In order to comply with WB's requirements for an open and transparent consultation process, MEPIU with the support of the commune Bacioi created a Social Impact Monitoring Committee. The scope of SIMC is to monitor the environmental and social impact of the construction activity on community.


The detailed Public consultation Plan has been developed by MEPIU and is attached to this document. The template for using and developing a Public Consultation Report is presented in the Annex 14.4.

13.1.2 Consultations Feedback/Grievance Redress Mechanism

The draft Site Specific ESIA/ESMP shall be presented to WB to receive non-objection and after that the document shall be submitted to the Bacioi Commune Council to be consulted by community from the commune Bacioi, SIMC members and all interested parties.

The information disclosure package consists of the following documents (i) The Site Specific ESIA/ESMP, (ii) the provision of the Environmental Permit issued by the Environmental Agency, (iii) the provision of the Law no. 120/2022 for the declaration of the project work of public utility and national interest, (iv) the approved Plan and profiles specific for this affected corridor in the Cahul District, (v) leaflet and (vi) mechanism for grievances, (vii) etc. The documents shall be published on the MEPIU, Moldelectrica and the Bacioi mayoralty web sites.

The document Site Specific ESIA/ESMP shall be publicly disclosed and consulted for a minimum of 30 days and comments, proposals, objections shall be sent to the MEPIU via e-mail provided in the leaflet and valuable comments shall be incorporated in the document. Direct comments will be possible to be provided during public consultations, before meeting or after. Also, during Project implementation GRM will work and feedback can be received via different channels of

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 158/207
---	--	----------------------

communications: phone, email, webpages, SIMCs and the commune Bacioi, Moldelectrica and MEPIU, etc.

The feed-back for proposals of the improvement of the Site Specific ESIA/ESMP shall be submitted to the following e-mail: (i) MEPIU at mepiu@mepiu.md, (ii) at the Moldelectrica e-mail: anticamera@moldelectrica.md and (iii) the Commune Bacioi Council, the entity responsible for issuance of the Urbanism Certificate for Design (UCD). Moldelectrica representatives are responsible for technical aspects, the Commune Bacioi Council is responsible for requirements established in the UCD and MEPIU has overall responsibility for revising the present document by including proposals for improvement, grievances, complaints and other information and finally submit revised document to the Commune Bacioi Council for receiving Construction Authorization.

The form for providing feed-back from interested parties is presented in the Annex 3.

Table 13-1: Communication channel for submitting feed-back or grievances from community

MEPIU ⁵⁰	S.E. Moldelectrica ⁵¹	The Commune Bacioi Council ⁵²
Chisinau, 1, A. Russo str., of. 163, Tel.: (+373) 22 496790 (+373) 22-49-67-90 E-mail: mepiu@mepiu.md	Chisinau, 78, V. Alecsandri str. Tel.: (+373) 22 22-22-70, Fax: (+373) 22 25-31-42 E-mail: anticamera@moldelectrica.md	The Secretary of the Commune Council: Tel: +373 69 750394 E-mail: chiochiu@bacioi.md
Verbal complaints addressed to Project staff could be recorded in writing by the receiver and submit to MEPIU for revising the final Site Specific ESIA/ESMP and PC Report.		

13.1.3 Framework for Future Public Consultations

MEPIU submitted the document the ESIA/ESMP specific for the Chisinau SS to the Bacioi Mayoralty and organized public consultation on November 2023.

Table 13-2: Public Consultation Schedule

No.	Districts	CP planning	Revised ESIA/ESMP & PC Report	Receive the Construction Permit		
				Duration	Start	Finish
1	Chisinau District	23.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024
2	Ialoveni District	23.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024
3	Cimislia District	24.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024
4	Hincesti District	24.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024

⁵⁰ Source: <https://www.mepiu.md/rom/contacte>

⁵¹ Source: https://www.moldelectrica.md/ro/finances/competitive_energy_market

⁵² Source: <https://bacioi.md/contacte/>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 159/207

5	Cahul District	28.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024
6	Leova District	28.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024
7	UTA Gagauzia	29.11.23	15.12.2023	30 days	09.10.2023	09.11.2023
8	Taraclia District	29.11.23	15.12.2023	30 days	Q-1, 2024	Q-1, 2024

Public consultation shall be organized by the Bacioi Commune Council and the scope of this consultation is to provide the final ESIA/ESMP specific for the upgrading the 330/110/35 kV Chisinau Substation for consulting SIMC members and the Bacioi local community and finally the Site Specific ESIA/ESMP shall be revised by MEPIU/Consultant by incorporating the new proposed mitigation measures and submitting the entire package of documents to the Chairman of the Mayoralty Bacioi to issue the Construction Authorization.

13.1.4 Access to Information and GRM

MEPIU shall organize public consultation at the Bacoii Commune Council by inviting the affected community from the commune Bacioi at the public consultation process and material used at the public consultation process is the final draft Site Specific ESIA/ESMP for the upgrading the Chisinau Substation presented in Romanian language. At the public consultation process, the revised leaflet shall be used with specific Project's information and objectives and participants shall use grievance redress mechanism (GRM) specific for improvement of the Site Specific ESIA/ESMP.


For Public Consultation process, a Non-technical Report shall be developed in based on mitigation measures presented in the site specific ESMP in the Romanian language to be accessible for local community in a simple and understandable format. The Non-Technical Report shall be submitted to the community from commune Bacioi and the Mayor of Bacioi and shall be published on the web page of the Bacioi Commune.

The following web sites can be accessed to and are available for find out much more information about the project implementation process: (i) www.mepiu.md, (ii) www.moldelectrica.md, <https://bacioi.md/> and grievances, proposal for improvement or other information can be submitted to the communication channels or GRM provided in the Table 11-1.

13.2 Installation of the Site Informational Panel

The site informational panel shall be displayed on the construction site at a visible place at the main entrance to the site or in another place after consultation with MEPIU/ME and Bacioi Mayoralty.

The information panel shall be made of waterproof and reinforced materials, which will contain the following information: Contract Name, Financing Entities, Employer, Beneficiary, Contractor, Engineer/Consultant, Contract value, Contract duration, Start and finish of the works.

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 160/207
---	--	----------------------

The site information panel will be located after obtaining the Construction Authorisation, from the start of the construction works until the final acceptance of the object.

The site informational panel shall contain the communication channels with GRM (specific for Level I (SIMC Bacioi Commune), Level II (District) and Level III (MEPIU/MoEn/WB)) (e-mail address, phone numbers, etc.) for submitting feed-back or grievances from community and other interested parties of the (i) Employer (MEPIU), (ii) Beneficiary (S.E. Moldelectrica), (iii) Contractor, (iv) Engineer/Consultant, the Bacioi Commune Council, etc.

13.3 Consultation and Participation

13.3.1 Consultation and participation of workers

Contractor shall consult workers and / or their representatives and allow them to take part in discussions on all questions relating to safety and health at work.

This presupposes (i) the consultation of workers, (ii) the right of workers and/or their representatives to make proposals, and (iii) balanced participation in accordance with national laws and /or practices.

Workers or workers' representatives with specific responsibility for the safety and health of workers shall take part in a balanced way, in accordance with applicable OHS law of Republic of Moldova and WB, or shall be consulted in advance and in good time by the employer with regard to any measure which may substantially affect safety and health and other aspects.

Workers' representatives with specific responsibility for the safety and health of workers shall have the right to ask the contractor to take appropriate measures and to submit proposals to him to that end to mitigate hazards for workers and/or to remove sources of danger.

13.3.2 Consultation and participation of the community

The community play a key role in the project implementation by monitoring social aspect of not disturbing community day-to day activities at home or in the field. The SIMC procedure is described in the SIMC Regulation developed by MEPIU with Grievance Redress Mechanism. The SIMC procedure shall be implemented by MEPIU with the support of the Construction Supervision Engineer.

In this sense a Social Impact Monitoring Committee (SIMC) has been created in the Bacioi Mayoralty (level II) and for level I (construction sites) in the commune Bacioi. Affected people from the commune Bacoï shall submit in written form the complaint, request for change, proposal for improvement of the construction process to the SIMC of level I established in village Braila.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 161/207

The SIMC from the commune Bacioi shall organize the meeting and shall discuss and identify solution for solving non-conformity. Not solved problem at level I SIMC, the problem shall be solved at the SIMC level II, by the specialists from the Bacioi Commune.

The Chairman of the SIMC (level II) is the Chairman of the Bacioi Commune and the representative of the CSE is the secretary. All social aspect coming from people has to be discussed at the SIMC meeting and all nonconformities have to be solved together with the Contractor. The Contractor representative shall be present at the SIMC meeting as the invitee member. All complaints, requests for changes, proposals for improvement, and their resolutions should be recorded in the Complaints Register by the Construction Supervision Engineer and submitted to the MEPIU for inclusion in the regular project progress report.

14 Annexes

- 14.1 The Incident Report template
- 14.2 The Nonconformity and Corrective Actions Report template
- 14.3 The feedback form for public consultation process template
- 14.4 Public Consultation Report template
- 14.5 Human Resource Procedure template
- 14.6 Avian Risk Assessment Report specific for construction stage
- 14.7 Avian Risks Assessment Report specific for operational stage
- 14.8 Stakeholder Engagement Plan
- 14.9 Archaeological Notice issued by the National Archaeological Agency



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 162/207

Annex 14.1: The Incident Report form

INCIDENT REPORTING FORM			
General Information			
Project Name, Activity			
Name of Project Implementing Agency			
Name of Contractor and subcontractors			
Name, position and company of main person(s) involved with/ causing the Incident			
Details about Accident / Incident			
Date and time of incident			
Location of incident			
Type of incident	<i>E.g. Fatality, Injury, major oil spill, social unrest, outbreak of violence, labor strikes etc.</i>		
Detailed description of incident (attach photos if needed)	<i>Describe in detail what has happened in a chronological manner. Who was involved? Which activities were performed? Under which external circumstances did the incident occur? What was the reason for the Incident? Etc.</i>		
Describe victims and damage	<i>Fatalities (including number deceased and differentiating between employee/ contractor fatalities and members of the public). Number injured (mention hospitalizations/ loss of limb). Number of injured in the community (if any). Loss/ damage to company facilities or operating environment. Environnemental damage (e.g. water pollution, etc.).</i>		
Describe immediate response	<i>Which immediate activity was taken? E.g. construction activities interrupted, first aid given, injured person taken to hospital, police informed, task force implemented etc.</i>		
Describe long-term response	<i>Describe long-term activities to prevent this incident to happen again. Describe further investigations if any. Describe how lessons learned will be shared among employees.</i>		
Incident Report Approval			
	Position	Name	Date
Prepared by			
Approved by			



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 163/207

Annex 14.2: The Nonconformity and Corrective Actions Report form

Part A: Nonconformity Report			
Non-conformance (To be completed by NCR Preparer or Auditor):			
Title of NCR:			
NCR Number:		Date Issued:	
NCR Prepared By:		NCR Issued To:	
Job Title		Job Title	
CS Engineer		Contractor	
EHSS Expert		Subcontractor	
Details of the Non-conformance (To be completed by NCR Preparer or Auditor)			
Major <input type="checkbox"/>		Minor <input type="checkbox"/>	
Description			
Insert a clear and concise description of the Non-conformance identified and any additional supporting documents (such as reports, drawings, photographs, etc.) evidencing the situation/problem identified, and attach to the NCR.			
Requirement relating to the Non-conformance			
Insert details of the relevant governance document(s) such as contract, procedure, specification or standard, as applicable (including any Document Reference Numbers)			
Part B: Classification of aspects and dangers			
For reporting/benchmarking purposes, Non-conformances are classified into at least one of six categories. Tick the most appropriate options below			
	To be completed by NCR Preparer or Auditor		
1	Materials		
2	Machine & equipment		
3	Measurement (monitor and control by management)		
4	Manpower (training included)		
5.	Methods (workmanship included)		
6	Health and safety		
7.	Environment and Social		
Details of the Root Cause Documentation			
Refer any internal meetings, investigations, audits that took place to identify and confirm root cause and attach any relevant records (Minutes, reports etc.)			
Time table:			
Proposed by:			
Name:			
Date:			
Reviewed by:			
Name:			



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 164/207

Signature:

Date:

Part C: Remedial (Correction) and Corrective Action(s) to address Non-conformance

Correction Actions (To be completed by the Responsible Manager)

Insert a clear and concise description of the Correction (Remedial Action to be taken to rectify the Major Non-conformance identified)

Proposed by

Name of Responsible Manager:

Job Title:

Planned Completion Date:

(Specify an appropriate and realistic date)

Signature:

Reviewed by

(Name of NCR Issuer or Issuer Line Manager)

Date:

Signature

Corrective Action(s) (To be completed by Responsible Manager):

Please insert details of the Corrective Action to be taken to prevent recurrence of the identified Non-conformance.

Proposed by:

Name of Responsible Manager:

Job Title:

Expected Timescale:

(Specified date; monthly; periodic; on-going; etc.)

Signature:

Reviewed by

(Name of NCR Issuer or Issuer Line Manager)

Date:

Signature

Part D: Closure of Non-conformance

Verification of completion of the Corrective Action(s) (To be completed by NCR Preparer or Auditor)

Verified Complete
(Select as applicable)

Yes
No

The Corrective Action(s) above have been satisfactorily completed by the relevant Responsible Manager.

Comments:

Verified by NCR Preparer or Auditor:

Name:

Date:

Job Title:

Signature:

Reviewed/Approved by:


(Lead Auditor, Quality Manager or other Senior Manager as per applicable NCR Procedure)

Name:

Date:

Job Title:

Signature:

 MEPIU	POWER SYSTEM DEVELOPMENT PROJECT The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage	Page: 166/207
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Annex 14.4: Public Consultation Report template

1. Purpose of stakeholder engagement within the site specific ESIA/ESMP – short description why needs to engage stakeholders, responsible for engagement in the risk assessment process specific for design phase;
2. Stakeholder engagement and consolation processes for Chisinau Substation – here should be provided preliminary plan of engagement with scoping of engagement, objectives, stakeholders who will be engaged, activities during engagement and main documents that will be consulted.
3. Previous SE and Consultations – here should be described consultations that have already been conducted with attached as Annex evidence (photos, protocols, feedbacks).
4. Stakeholder Engagement Plan – short description of this document and link to the Annex where it should be attached. Also link where this document was disclosed.
5. Public disclosure of and consultations for the ESIA and associated documents – here need to describe disclosure procedure of ES risk assessment and describe consultations inputs that will be made during disclosure with photo evidence, protocols, feedbacks.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 167/207

Annex 14.5: The Human Resource Procedure template

The Human Resource Procedure

1. Introduction
2. Objectives
3. Scope of application
4. Requirements for compliance with applicable laws of Republic of Moldova and WB
5. Requirements for employment process and terms of employment
6. Requirements for workforce protection
7. Requirements specific for Grievance Redress Mechanism (GRM) specific for HR process,
8. Requirements for monitoring the HR process and management of document,
9. Requirements for reporting process to Construction Supervision Engineer and MEPIU,
10. Records management



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 168/207

Annex 14.6: Public Consultation Report for Site specific ESIA&ESMP for the 400 kV OHTL and Chisinau SS.

POWER SYSTEM DEVELOPMENT PROJECT

(P160829)

THE DETAILED DESIGN STAGE

**ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT &
ESMP FOR 400 KV OHTL VULCANESTI – CHISINAU**

Public Consultation Report

November 2023



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 169/207

Table of content

1. INTRODUCTION	170
2. PUBLIC DISCLOSURE.....	170
3. PUBLIC HEARING	172
4. MAIN COMMENTS AND PROPOSALS	173
5. CONCLUSION	174
6. APPENDIX	176
6.1 MINUTES OF MEETINGS.....	176
6.2 Letters to Rayonal Councils and SIMCs about organization of public Consultations	183
6.3 Public consultations pictures by locality	186
6.4 The list of attendances by locality.....	193
6.5 The list of media sources that reflected the public consultations.....	207



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 170/207

1. Introduction

The initial public consultation was organized in District Centers and Mayorality of the Commune Bacioi (Chisinau Mayorality) to bring the progress of preparing ESIA & ESMP at the design stage to community, SIMC members and other interested parties and also to provide the identified main environmental & social impacts and proposed mitigation measures for controlling risks. Also, it was presented the specific information about the Project context and plans for works.

According to the environmental and social requirements specified in the Environmental Permit⁵³ no. 1/4745 of December 31 2019 4745/2019 issued by the Environmental Agency for the Project PDSE, the environmental and social impact assessment at the design stage with mitigation measures in ESMPs shall be public disclosed and consulted with affected localities and affected peoples. ESIA & ESMPs Reports have been published on the websites of MEPIU an Moldelectrica on September 2023 for Cahul District and the Bacioi Commune and October 31, 2023 for the rest Districts Ialoveni, Hincesti, Cimislia, Leova, Taraclia, ATU Gagauzia in order to be consulted by community, stakeholders and other interested parties and use communication channel for submitting proposals, suggestions for improvement, complaints and other information. A Non-technical Summary Report with information from ESIA & ESMP has been developed and published on web pages of MEPIU, Moldlectrica and Districts. Summary hard copies of these documents were accessible to public and at the offices of local authorities of the Project area. The disclosure period for the ESIA&ESMP report is 30 days. Stakeholder engagement formally ensured through public hearing meetings to be held after the 30 days disclosure period with involvement of all stakeholders. The records of these public consultations, announcements, minutes and lists of attendees, etc. will be presented to the WB who will file them in their operational portal for their own records. The records including minutes should be made publicly available at the local head office for the resident's information in a format appropriate for disclosure (ie. without any personal data).

2. Public disclosure

A Non-technical Summary Report⁵⁴ and grievance form was published on MEPIU's website on October 2, 2023 and on web pages of Districts.

The draft final ESIA/ESMPs⁵⁵ were published on MEPIU web site⁵⁶ on September and October. The letters to Districts have been sent within 15 days before organization of the public consultation (November 1st, 2023) and requested Administration of Districts to host the public meeting. A PPT was presented to the audience for environmental & social aspects. MEPIU also provided leaflets in Romanian and Russian languages to each participant with information

⁵³ Source: https://www.moldelectrica.md/files/docs/md_ro_project/Acord_de_Mediu_BtB_LEA_400%20kV_Vulcanesti-Chisinau.pdf

⁵⁴ Source: [Documentația de evaluare a impactului de mediu și social și a planurilor de management de mediu și social specific amplasamentelor pentru LEA 400 kV și Stația Electrică Chișinău, elaborate la etapa de proiectare detaliată \(mepiu.md\)](#)

⁵⁵ Source: [Proiectul de Dezvoltare a Sistemului Electroenergetic \(PDSE\) \(mepiu.md\)](#)

⁵⁶ Source: <https://www.mepiu.md/eng/current-projects/power-system-development-project-psdp-1>



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for upgrading the 330/110/35 kV Chisinau Substation The Detailed Design Stage

Page: 171/207

about Project and contact information of MEPIU, Moldelectrica and the World Bank. Several posters for each mayoralty were provided to be placed in respective settlements.

Posters applicable within the public consultation process (small and big formats)





MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 172/207

3. Public hearing

The public meetings were scheduled as follows:

Date	Hour	Locality	Location
23.11.23	10.00	Bacioi	Commune Bacioi Mayoralty
	12.00	Ialoveni District	District Council Hall
24.11.23	10.00	Cimislia District	District Council Hall
	13.00	Hancesti District	District Council Hall
28.11.23	10.00	Cahul District	District Council Hall
	13.00	Leova District	District Council Hall
29.11.23	10.00	Comrat (UTA Gagauzia)	District Council Hall
	13.00	Taraclia District	District Council Hall

The team of presenters was:

- Mr. Veaceslav Vladicescu, Environmental Individual Consultant
- Mr. Anatol Burlacu, EHS Specialist of MEPIU
- Mrs. Ala Rotaru, Social Specialist of MEPIU
- Mrs. Elena Junghina, Communication and Public Information Specialist of MEPIU

Also, representatives Contractor were presented at the public consultation.

Total number of participants were 101, in 8 meetings. From which 38% - women.

Meeting location	Men	Women	Total
Cahul	8 or 72.7 %	3 or 27.3 %	11
Leova	10 or 66.7 %	5 or 33.3 %	15
Bacioi	6 or 35.3 %	11 or 64.7 %	17
Ialoveni	7 or 53.8 %	6 or 46.1 %	13
Hancesti	6 or 66.7 %	3 or 33.3 %	9
Cimislia	9 or 90 %	1 or 10 %	10
Comrat	10 or 71.4 %	4 or 28.6 %	14
Taraclia	7 or 58.3 %	5 or 41.7 %	12
Total	63 or 62.4 %	38 or 37.6 %	101

At the public consultation the following environmental and social topics were presented to the interested public with support from MEPIU and Contractor specialists:

- General information about purpose of ESIA documentation and the Project context;
- Detailed design elements of the project in the area of locality;
- Project's positive involvements on the community through SIMCs and role and responsibilities;
- Specific identified possible impacts on the environment and population;
- Specific mitigation measures proposed;
- Grievances redress mechanism (GRM);



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 173/207

- SIMC role and responsibilities;
- Contact information of stakeholder (GRM) (MEPIU, MoEn, Moldelectrica, WB, SIMC)

4. Main comments and proposals

Cahul

1. *The LPA from rayon but also mayoralties is supporting this project. The population did not see any problems if they will receive a good price for their lands.*
2. *The questions probably will be in each locality related with particular cases of valuation of land plots and access to their lands during construction.*
3. *Related with environmental and social no any questions as Environmental Agency already issued the Environmental Permit.*

Leova

1. *The Head of the Leova District mentioned about need for a long- term support for the rayon regarding compensation for lands of owners.*
2. *The representants of affected community - Borogani mentioned that the OHTL route was changed with about 130 m from previous location due to first public consultations and following letters and discussions with MEPIU (now the distance from the village is more than 250 m). The mayor is still not sure if OHTL is sufficient far from locality related with health of population and have concerns about influence of OHTL electromagnetic waves to population.*
3. *Also, it was concerns if electromagnetic waves can affect the agricultural production in OHTL protection zones and surrounding areas.*
4. *Mayor also asked if mayoralty will receive compensations for public land transferred to state. Also, for private lands that is acquired from PAPs and transferred to state mayoralty will lose a source of income for local budget (local taxes), even this is a small amount over the years can be an important sum.*
5. *Concerns that grievances from population and participation on SIMC will be an additional job time-consuming for LPA.*

Bacioi

1. *The main concern is about land price that will be proposed.*
2. *The possibility to change the other OHTL in the village to be relocated to avoid the village area.*

Ialoveni

1. *Access to agricultural lands needs to be maintained properly during the construction stage, mentioned LPA.*
2. *The PAP asked what will be if he has already detailed design ready for warehouse in the protection zone of the OHTL.*

Hancesti



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 174/207

1. Deputy chairman of district do not see the role and implications of the District Council in resettlement issues. He did not see the need of SIMC at the rayon level but just at the local level.
2. Concerns that grievances from population will be an additional job time-consuming for LPA.
3. Also, he is looking for some financial benefit for rayon from this Project.

Cimislia

1. Deterioration of local and agricultural roads due to OHTL construction activities
2. The rayon LPA have extensive experience in land acquisitions as they offered support in already 2 greenfield road projects (Porumbrei and Cimislia bypasses financed by IFIs).
3. The need for better explanation to PAPs is needed in the future consultations with PAPs related with land valuation process and servitude contracts in the future.

Comrat (UTAG)

1. Mayors are concerned about possible restrictions in land use for OHTL protection zones and how this will affect the agricultural incomes.
2. They mentioned also about importance of fair compensation of all PAPs.
1. Deterioration of local & agricultural roads due to OHTL construction activities.
3. Asks about possibility of local job creation by Project (temporary & permanent jobs).
4. Question about if works will be in the harvest period the people will be compensated for lost.
5. Question about influence on birds.

Taraclia

1. If the Detailed design was consulted with rayon authorities, received urbanism certificate.
2. If the surveys were done in the fields or just from existing maps.
3. Express concerns if electromagnetic waves can affect the agricultural production in OHTL protection zones and surrounding areas.
4. Asks about possibility of local job creation by Project thru mayoralty as they know better the specialists in their locality.
5. Questions about land prices.
6. Deterioration of soil, local and agricultural roads due to OHTL construction activities.

5. Conclusion

Most of the discussions, questions and proposals raised during public hearings were linked with:

- Land acquisition processes & mechanism of land valuations & schedule of land compensations.
- Restrictions to agricultural use during and after Project interventions.
- Health & Safety issues regarding OHTL electromagnetic influences near the localities



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 175/207

- Possibility to provide local jobs linked to OHTL construction.
- Concerns related with mayoralty incomes due.
- Concerns that grievances from population will be an additional job / time-consuming for LPA
- Necessity to ensure a higher level of communication and information to the population, more preferably through the mass-media.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 176/207

6. Appendix

6.1 MINUTES OF MEETINGS

Minutes of meeting
Environmental & Social Impact Assessment for OHTL and Chisinau SS

<i>Date</i>	28.11.2023
<i>Time</i>	10.00 - 11.00
<i>Location</i>	Cahul District Council
<i>Consultants/ moderators</i>	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
<i>No. of participants</i>	11 List of attendance - attached
<i>Topics presented by Consultant</i>	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project & location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism (GRM) - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
<i>The questions raised and/or received proposals of participants:</i>	<i>Answers / comments of moderators / consultants:</i>
1 <i>The LPA from rayon but also mayoralities is supporting this project.</i>	The Project is for entire country so the supporting from each level is important.
2 <i>The population did not see any problems if they will receive a good price for their lands</i>	The RAP document and RAP public consultations will answer to all questions related with land acquisitions and compensations. The price will be established by the IPOT, according to the provisions of the land sale-purchase legislation
3 <i>The questions probably will be in each locality related with particular cases of valuation of land plots and access to their lands during construction.</i>	In each affected locality will be the RAP consultations organized in a few months after the draft RAP document will be accepted by WB and publicly disclosure.
4 <i>Related with ES no any questions as Environmental Agency already issued the Environmental Permission</i>	Yes, the Environmental Agency already gave the Environmental Permission and is valid for the entire construction period.
<i>Conclusion</i>	Acceptance of the Project is High. Limited concerns still appear especially on the land issues.

Minutes of meeting
Environmental & Social Impact Assessment for OHTL

<i>Date</i>	28.11.2023
<i>Time</i>	10.00 - 11.30



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 177/207

	Location	Leova District Council	
	Consultants/ moderators	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina	
	No. of participants	15	List of attendance - attached
	Topics presented by Consultant (inclusive PPT)	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MIRD, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality. 	
	The questions raised and/or received proposals of participants:		Answers / comments of moderators / consultants:
1	<i>The Head of Leova Rayon mentioned about need for a long-term support for the rayon and mayoralty not just compensation for lands of owners.</i>		The GoM is supporting LPAs from other budget lines and with finances from IFIs on social, education, roads, etc.
2	<i>The representants of affected community - Borogani mentioned that the OHTL route was changed with about 130 m from previous location due to first public consultations and following letters & discussions with MEPIU.</i>		It is considered positive feedback from LPA
3	<i>Also, it was concerns if electromagnetic waves can affect the agricultural production in OHTL protection zones & surrounding areas.</i>		According to local and international data, no evidence impact of electromagnetic waves to agricultural production.
4	<i>The Mayor is still not sure if OHTL is sufficient far from locality related with health and environmental protection. Population have concerns about influence of OHTL electromagnetic waves to health.</i>		It was mentioned that in country there are OHTL constructed near settlements. Afraid about H&S is understandable but the safety corridor of 70 m is ensured more than double need.
5	<i>Mayor also asked if mayoralty will receive compensations for public land transferred to state. Also, for private lands that is acquired from PAPs and transferred to state mayoralty will lose a source of income for local budget (local taxes), even this is a small amount over the years can be an important sum.</i>		Not. This is a Project for national purpose and public land has different status including in LPA administration. Transferring one land from municipality to other state body according to the Law is for free. Related with lost of local taxes is considered neglectable as small surfaces of land for each locality will be transferred. But these questions regarding local taxes are not within the scope of the project and it was recommended to address the MF for clarifications on the transposition of fiscal legislation.
6	<i>Concerns that grievances from population and participation on SIMC will be an additional job time-consuming for LPA.</i>		The first stage of submitting grievances is SIMC of level I with the support of the Construction Supervision Engineer, who will resolve them and inform MEPIU. The SIMC Level1 competences has roles and responsibilities to receive and solve grievances from SIMC level I. In case it will not be possible to solve the problems by the LPA or SIMC, within 3 days, according to the legislation, they can redirect the complaint to other responsible authorities and with a copy to the MEPIU.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 178/207

		Anyway, at all stages of the Project's implementation, MEPIU will provide any support to SIMC for the resolution of all grievances and has designated responsible specialists in this regard.
	Conclusion	Acceptance of the Project is moderate.

Minutes of meeting

Environmental & Social Impact Assessment for OHTL and Chisinau SS

	Date	23.11.2023
	Time	10.00 - 11.15
	Location	Bacioi LPA premises
	Consultants/ moderators	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
	No. of participants	17 List of attendance - attached
	Topics presented by Consultant (inclusive PPT)	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
	The questions raised and/or received proposals of participants:	Answers / comments of moderators / consultants:
1	<i>The main concern is about land price that will be proposed</i>	The RAP document is under development and will answer to these questions. Another meeting specially on RAP will be organized in the next months with SIMC members and affected people.
2	<i>The possibility to change the other OHTL in the village to be relocated to avoid the village area. (not part of this Project)</i>	A separate meeting on these issues has to be organized with Moldelectrica. The density of lines near Chisinau SS is high and there are limitations in changes of OHTL route.
	Conclusion	The Project has good acceptance.

Minutes of meeting

Environmental & Social Impact Assessment for OHTL

	Date	23.11.2023
	Time	12.00 - 13.30
	Location	Ialoveni Rayonal Council
	Consultants/ moderators	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
	No. of participants	13 List of attendance - attached
	Topics presented by Consultant (inclusive PPT)	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 179/207

		<ul style="list-style-type: none"> - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
	<i>The questions raised and/or received proposals of participants:</i>	<i>Answers / comments of moderators / consultants:</i>
1	<i>Access to agricultural lands needs to be maintained mentioned LPA even during construction period.</i>	The access to the land that will not be permanently affected can be restricted temporary. If some restriction will be during harvest period the compensations will be provided according to RAP provisions.
2	<i>The PAP asked what will be if he have already detailed design ready for warehouse in the protection zone of the OHTL.</i>	This question has to be examined separately but in the 70m of OHTL protection zone is not possible to build any constructions.
3	The representatives of the business company from the v. Costesti were satisfied that their complaints were resolved positively, by making the necessary changes in the technical project for the redesign of the 400 kV overhead power line (LEA).	It is considered positive feedback from LPA
	<i>Conclusion</i>	Project Public acceptance - high

**Minutes of meeting
Environmental & Social Impact Assessment for OHTL**

	<i>Date</i>	24.11.2023
	<i>Time</i>	13.00 - 13.45
	<i>Location</i>	Hancesti District Council
	<i>Consultants/ moderators</i>	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
	<i>No. of participants</i>	9 List of attendance - attached
	<i>Topics presented by Consultant (inclusive PPT)</i>	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
	<i>The questions raised and/or received proposals of participants:</i>	<i>Answers / comments of moderators / consultants:</i>
1	<i>Deputy president of rayon do not see the role and implications of rayon council in resettlement issues. He did not see the need of SIMC at the rayon level but just at the local level. Concerns that grievances from population will be an additional job time-consuming for LPA.</i>	The MEPIU team explained the role Rayon LPA in this project and this is in the Law no. 120/2022. Also, the role of LPA and created SIMCs Level I and II is to be a liaison between population & MEPIU. It was mentioned, that at all stages of the Project's implementation, MEPIU will provide any support to SIMCs Level I & II for the examination of all grievances and has designated responsible specialists in this regard.
2	<i>Also, he is looking for some financial benefit for rayon from this Project.</i>	The benefit will be for entire county.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 180/207

<i>Conclusion</i>	Project Public acceptance - high
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**Minutes of meeting
Environmental & Social Impact Assessment for OHTL**

<i>Date</i>	24.11.2023
<i>Time</i>	10.00 - 11.30
<i>Location</i>	Cimislia District Council
<i>Consultants/ moderators</i>	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
<i>No. of participants</i>	10 List of attendance - attached
<i>Topics presented by Consultant (inclusive PPT)</i>	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
<i>The questions raised and/or received proposals of participants:</i>	<i>Answers / comments of moderators / consultants:</i>
1 <i>Deterioration of local and agricultural roads due to OHTL construction activities</i>	The used roads by Contractor have to be leaved at least in the same conditions as before the Project. So, Contractor is obliged if damaged of some portion of the road to restore the road at the initial conditions.
2 <i>The rayon LPA have extensive experience in land acquisitions as they offered support in already 2 greenfield road projects (Porumbrei and Cimislia bypasses financed by IFIs).</i>	Yes, your experience in land acquisition will be very valuable in the Project and speedup the process of finding PAPs and working with papers. It is considered positive feedback from LPA
3 <i>The need for better explanation to PAPs is needed in the future consultations with PAPs related with land valuation process and servitude contracts in the future.</i>	Yes, in each locality will be organized public consultations with PAPs on RAP and after will be separately confidential negotiations on land issues. The price will be established by the IPOT, according to the provisions of the land sale-purchase legislation.
4 The representatives of the District Council recommended the cooperation with the local Television, for better information and communication procedures with the population.	The recommendation was considered acceptable and welcome. MEPIU representatives took the coordinates of the local Television office
<i>Conclusion</i>	Project Public acceptance - high

**Minutes of meeting
Environmental & Social Impact Assessment for OHTL**

<i>Date</i>	29.11.2023
<i>Time</i>	10.00 - 11.30
<i>Location</i>	Comrat Municipality, ATU Gagauzia premises
<i>Consultants/ moderators</i>	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
<i>No. of participants</i>	14 List of attendance - attached



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 181/207

<p><i>Topics presented by Consultant (inclusive PPT)</i></p>	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MIRD, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
<p><i>The questions raised and/or received proposals of participants:</i></p>	<p><i>Answers / comments of moderators / consultants:</i></p>
<p>1 <i>The mayors are concerned about possible restrictions in land use for OHTL protection zones and how this will affect the agricultural incomes.</i></p>	<p>Some restrictions of course will be: a) carrying out constructions, capital repairs, reconstructions or demolition buildings and constructions; b) execution of any mining, loading-unloading, dredging, dynamiting works and improvement, planting and cutting trees and shrubs, installing dams, trellises for vineyards and orchards; c) the passage of cars and mechanisms, with or without a load, having a height over 4.5 m from the road surface; d) planting green areas with perennial plantations; e) the location of car fueling stations and other fuel depots and lubricants demolition or reconstruction of buildings, bridges, tunnels, railways, roads and other constructions in the places where overhead power lines etc.</p>
<p>2 <i>They mentioned also about importance of fair compensation of all PAPs.</i></p>	<p>All these aspects are described in RAP and will be discussed on other meeting but <i>fair compensation of all PAPs is one of the most important criteria of good implementation and a key monitoring indicator.</i> The price will be established by the IPOT, according to the provisions of the land sale-purchase legislation. Consultations on the RAP will be organized in each locality separately, with the participation of the owners of the affected lands</p>
<p>3 <i>Deterioration of local and agricultural roads due to OHTL construction activities</i></p>	<p>The used roads by Contractor have to be leaved at least in the same conditions as before the Project. So, Contractor is obliged if damaged some portion of the road to restore to it initial conditions.</p>
<p>4 <i>Asks about possibility of local job creation by Project (temporary & permanent jobs).</i></p>	<p>Contractor reported that already established his office and warehouse/storage area in the v. Chirsova, UTAG. They, hired already locals and intend to do more in the future depending of Project needs.</p>
<p>5 <i>Question about if works will be in the harvest period the people will be compensated for lost.</i></p>	<p>The access to the land that will not be permanently affected can be restricted temporary. If some restriction will be during harvest period the compensations will be provided according to RAP provisions.</p>
<p>6 <i>Question about influence on birds.</i></p>	<p>A special birds impact survey (avifauna) was developed in 2022. This study identified the corridors of migration of birds, most vulnerable and endangerers species and proposed mitigation measures that are part of ESIA/ESMP. Also, in the design the artificial nesting places will installed to several polls.</p>
<p><i>Conclusion</i></p>	<p>Acceptance level of Project is high.</p>

Minutes of meeting



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 182/207

Environmental & Social Impact Assessment for OHTL

	Date	29.11.2023
	Time	14.00-15.00
	Location	Taraclia, House of Culture
	Consultants/ moderators	Mr. Veaceslav Vladicescu, Mr. Anatol Burlacu, Mrs. Ala Rotaru, Mrs. Elena Junghina
	No. of participants	12 List of attendance - attached
	Topics presented by Consultant (inclusive PPT)	<ul style="list-style-type: none"> - General information about purpose of ESIA documentation - General information about Project - Detailed design elements of the project and location in the area of locality - Project's involvements for the community and impact corridor. - Specific identified possible impacts on the environment and population - Specific mitigation measures proposed. - Grievances redress mechanism - Contact information of stakeholder (MEPIU, Moldelectrica, MoEn, WB etc.) - SIMC role and responsibilities - About RAP and future public consultations in each affected locality.
	The questions raised and/or received proposals of participants:	Answers / comments of moderators / consultants:
1	<i>If the Detailed Design was consulted with rayon authorities, received urbanism certificate and other permission documents.</i>	The DD was approved by state institutions. The DD cannot be started without Urbanism Certificates. The District authorities has to receive the design in order to be able to sign the Construction authorization. Partially, some of rayon already delivered to MEPIU the Construction authorizations.
2	<i>Deterioration of soil, local and agricultural roads due to OHTL construction activities.</i>	The soil layer, has to be removed and separately stored, used roads by Contractor have to be leaved at least in the same conditions as before the Project. So, Contractor is obliged if damaged some portion of the road to restore to the initial conditions.
3	<i>If the surveys were done in the fields or just from existing maps.</i>	The topographic survey and geological investigations were done in the field at the beginning of the project. The respective reports with pictures and locations are available and was used for DD and in the taken decision process.
4	<i>Express concerns if electromagnetic waves can affect the agricultural production in OHTL protection zones and surrounding areas</i>	According to local and international data, no evidence of impact because electromagnetic waves to agricultural production on OHTL protection zone of 70 meters.
5	<i>Asks about possibility of local job creation by Project thru mayoralty as they know better the specialists in their locality.</i>	Implication of mayoralty in helping Contractor to find specialists in the Project area are welcomed. This will be a useful help for both parties: Contractor and employees.
6	<i>Questions about land prices. The experience in the region with land expropriations for road construction was positive, especially on roads projects. The people received better prices than from the market.</i>	This is treated in RAP procedures. The price will be established by the IPOT, according to the provisions of the land sale-purchase legislation. Consultations on the RAP will be organized in the near future in each locality separately, with the participation of the owners of the affected lands.
	Conclusion	The acceptance of the project is high.



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 183/207

6.1 Letters to District Councils & SIMCs about organization of Public Consultations

UNITATEA CONSOLIDATĂ PENTRU IMPLEMENTAREA PROIECTELOR ÎN DOMENIUL ENERGETICII (UCIPE)		MOLDOVA ENERGY PROJECT IMPLEMENTATION UNIT (MEPIU)
str. Alecu Russo 1, bloc A1, of. 163, MD-2068, Chișinău tel. +373-22-49-67-90, fax +373-22-49-67-90 E-mail: info@mepiu.md , Pagina web: www.mepiu.md		I, Alecu Russo str., block A1, of. 163, Chișinău, MD-2068 tel. +373-22-49-67-90, fax +373-22-49-67-90 E-mail: info@mepiu.md , Web page: www.mepiu.md
nr. <u>11/2-530</u> / <u>10.11.</u> 2023		
UAT Conform Listei		
Copie:		
Ministerul Energiei		
Î.S. Moldelectrica		
<p>Prin prezenta, ne referim la implementarea Proiectului de Dezvoltare al Sistemului Electroenergetic din Republica Moldova pentru construcția liniei electrice aeriene (LEA) 400 kV Vulcănești-Chișinău și a stației electrice (SE) Chișinău, lucrările de construcție fiind declarate de utilitate publică și interes național în conformitate cu prevederile Legii nr. 120/2022 din 12.05.2022.</p>		
<p>Astfel, la etapa de proiectare au fost evaluate riscurile de mediu și sociale specific fiecărui raion, iar măsurile propuse pentru controlul riscurilor de mediu și sociale urmează a fi consultate cu părțile interesate. Măsurile propuse pentru control al riscurilor sunt descrise succint în Rezumatul Non-tehnic. Rezumatul Non-tehnic urmează a fi publicat pe paginile web al Consiliilor Raionale pentru a asigura accesul publicului interesat la informația de mediu și socială specifică activității de construcție, iar comunicarea între părțile interesate și UCIPE/Beneficiarul Î.S. Moldelectrica se va asigura prin utilizarea mecanismului pentru soluționarea reclamațiilor descris în rezumat.</p>		
<p>În acest sens, UCIPE solicită respectuos organizarea consultărilor publice de către Consiliile Raionale prin asigurarea prezenței reprezentanților Consiliilor Raionale, Primăriilor localităților afectate de activitățile proiectului, dar și a membrilor Comitetelor de monitorizare a impactului social (CMIS), create în localitățile afectate de lucrările de construcție, pentru a fi consultați despre măsurile de control al riscurilor de mediu și social de către Consultanții de mediu și social și suportul UCIPE și Î.S. Moldelectrica.</p>		
<p>Anexă: Rezumat Non-tehnic Evaluarea impactului de mediu și social specific amplasamentului și PMMS/PAS pentru LEA 400 kV și stația electrică Chișinău</p>		
Cu respect,		Ruslan SURUGIU
Director		
<p>Ex. Burlacu Anatoil e-mail: anatoil.burlacu@mepiu.md tel. 068388796</p>		



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 184/207

Lista Consiliilor Raionale:

1. Consiliul Local Băcioi (mun. Chișinău)
2. Consiliul Raional Ialoveni
3. Consiliul Raional Hîncești
4. Consiliul Raional Cimișlia
5. Consiliul Raional Leova
6. Consiliul Raional Cahul
7. Consiliul Raional Taraclia
8. Primăria mun. Comrat și Vulcănești (UTAG)

Graficul de organizare a consultărilor publice în UAT:

Data	Ora	Locația
23.11.2023	10.00	Consiliul Local Băcioi
	12.00	Consiliul Raional Ialoveni
24.11.2023	10.00	Consiliul Raional Cimișlia
	13.00	Consiliul Raional Hîncești
28.11.2023	10.00	Consiliul Raional Cahul
	13.00	Consiliul Raional Leova
29.11.2023	10.00	Consiliul Raional Comrat
	13.00	Consiliul Raional Taraclia

Lista Comitetelor de monitorizare a impactului social (CMIS)

Nr.	Denumire UAT	Numărul Comitetelor CMIS înființate în UAT	Localități (sate și comune)
1	Comuna Băcioi	1	Com. Băcioi
2	Raionul Ialoveni	4	Zimbreni, Costești, Hansca și Molesti
3	Raionul Cimișlia	10	Ivanovca Noua, Lipoveni, Gura Galbenei, Gradiste, Valea Perjei, Ecaterinovca, Javgur, Cenac, Topala și or. Cimislia
4	Raionul Hîncești	2	s. Buțeni, s. Fîrlădeni
5	Raionul Cahul	3	Burlaceni, Iujnoe și Borceag
6	Raionul Leova	1	Borogani
7	UTA Găgăuzia	6	Dezghingea, Congazcicul de Jos, Chirsova, Congaz, Svetlii și or. Vulcanesti
8	Raionul Taraclia	8	Albota de Sus, Albota de Jos, Balabanu, Novosiolovca, Aluatu, Salcia, Musaitu și Vinogradovca



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 185/207

UNITATEA PENTRU IMPLEMENTAREA
PROIECTELOR ÎN DOMENIUL
ENERGETICII
(UCIPE)



MOLDOVA ENERGY PROJECT
IMPLEMENTATION UNIT
(MEPIU)

str. Alecu Russo I, bloc A1, of. 163, MD-2068, Chişinău
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tel. +373-22-49-67-90, fax +373-22-49-67-90
E-mail: mepiu@mepiu.md, Web page: www.mepiu.md

No. 11/2-568 or November 15, 2023

Attn: KEC International Ltd., Association Siemens Energy SRL, Electromontaj S.A.
& Energotech S.A., Power Grid Corporation of India

Copy: S.E. Moldelectrica

Project: Moldova Power System Development Project (PSDP) - Contract no. 6380 – A1,
Contract no. 6380 – A2 and Contract no. 6380-A7.

Subject: Public Consultation for Site Specific ESIA/ESMPs for construction of 400 kV
OHTL and for upgrade of 330 kV Chisinau Substation

Hereby, we refer to the implementation of the Power System Development Project in the Republic
of Moldova.

Thus, MEPIU has disclosed ESIA & ESMPs specific for construction of the 400 kV OHTL and for
upgrading of the 330 kV Chisinau Substation on MEPIU and the Beneficiary (S.E. Moldelectrica)
web sites in order to be consulted by the project's stakeholders and other interested parties and
receiving feed-back from stakeholders for documents improvement.

The disclosed environmental and social documents can be download at the following link:
[https://www.mepiu.md/rom/proiecte-curente/proiectul-de-dezvoltare-a-sistemului-
electroenergetic-pdse](https://www.mepiu.md/rom/proiecte-curente/proiectul-de-dezvoltare-a-sistemului-electroenergetic-pdse)

Sincerely,

Director

Ruslan SURUGIU

Ex. Buriacu Anadol
E-mail: anadol.buriacu@mepiu.md



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POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 186/207

6.2 Public consultations pictures by locality

CAHUL DISTRICT



LEOVA DISTRICT



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POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage**

Page: 187/207



BACIOI MAYORALTY



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POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 188/207



IALOVENI DISTRICT



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 189/207



HANCESTI DISTRICT



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POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 190/207



CIMISLIA DISTRICT



COMRAT CITY ATU GAGAUZIA



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POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 191/207



TARACLIA DISTRICT



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POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 192/207





MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 193/207

6.3 The list of attendances by locality

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Primăria Comunei Băcioi

Data: 23 noiembrie 2023

Ora: 10:00

Temei: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burlocu Anatolie	Responsabil Mediu/SSM	UCIPE	062388796	
2.	Rotaru Alex	sp. șef	UCIPE	07962392	
3.	Jughina Blana	sp. comunicare	UCIPE	69828460	
4.	Cheloban Roman	Logos AutoCADing	KEC	060347382	
5.	NIRMALENDU HUI	șef oficiu	KEC	062186628	Nirmalendu Hui
6.	Tonu Maria	jurist	Primăria com. Băcioi	069631279	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 194/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Tulba Anu	Specialist	Primărie com. Băcești	068254842	Tulba A
3.	Breșna Adrian	specialist principal	Primăria com. Băcești	068765664	Breșna A
9.	Borș Elena	specialist	Primăria com. Băcești	060262402	Borș E
10.	Bivol Liba	specialist	Primăria com. Băcești	069295385	Bivol L
11.	DROSU Miha	specialist	Primăria com. Băcești	079526006	DROSU M
12.	GALUPA A-dru	EXPERT MEDIU SI SOCIAL KFC S.R.L.	KFC INTERNATIONAL	068203913	GALUPA A

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
13.	Stanile Dumitru	Specialist	Primăria Băcești	069742312	Stanile D
14.	Sacub Gheorghe	special.	Prim. Băcești	068115207	Sacub G
15.	Baba Lici Marta-Lia	Specialist	Primăria Băcești	060063326	Baba L
16.	Chiopciu Natalia	Specialist	Primăria com. Băcești	068480034	Chiopciu N
17.	Wolgan Eugen	Arch.	Primăria com. Băcești	069812402	Wolgan E
18.					



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 195/207

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Ialoveni

Data: 23 noiembrie 2023

Ora: 13:00

Temei: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burlacu Anatolie	Specialist Mediu / SSN	UCIPE	068 388 796	
2.	Putaru Alin	Sp. social	UCIPE	079623192	
3.	Elcus Junzheng	Sp. comunit	UCIPI	069828460	
4.	Samatios Emilia	inginer funciar	Ганзла	068755093	
5.	Bozbe Hiodor	inginer cadastral	S. Costești	068030377	
6.	GALUPA ALEXANDRU	SPECIALIST PE MEDIU ȘI SOCIAL	KIEC INTERNATIONAL	068203919	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 196/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Molodtsov Roman	Logist	KEC	060347382	
8.	NIRMALEND HUI	Sr. ofițer	KEC	062186628	Nirmalend Hui
9.	STICI MAREȘ	ARHITECT-ȘEF R-UL IALPVENI	C.R. IALPVENI	068070422	
10.	Ușor Emilia	șef adjuncț OT Chisinau	cancelaria de stat	068330862	
11.	Vasile Anu	Adm. G.T. Sula Ana Andrei	ȘT, Sula Ana Andrei	060282344	Vasile
12.	Mocanu Raisa	Linje de Zimbreni	pr. Zimbreni	069095904	

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
13.	GT, Bivol Rodica Luca Bivol Constantin	administrato		069225200	
14.					
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MEPIU

POWER SYSTEM DEVELOPMENT PROJECT
The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation
The Detailed Design Stage

Page: 197/207

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Cimișlia

Data: 24 noiembrie 2023

Ora: 10:00

Temei: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burlocea Anatolie	Specialist Mediu/ SSM	UCC PE	068388796	
2.	NIRONALENDU HUI	Șef-Aten	KEC	062886628	Nironale Hui
3.	GHALUPA ALEXANDRU	SPECIALIST MEDIU SI SOCIAL	KEC	068209319	
4.	Chelodțan Roman	Logist/ AutoLocal Eng.	KEC	060344382	
5.	Comerzan Igor	specialist principal PAT con. Cimișlia	cons. liud raional Cimișlia	079425204	
6.	Murteanu Victor	Spe. în dom. fiscale.	Primăria S. Topale	08455290	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 198/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Bergjan Florin	Specialist SAAR, CE Cimișeq	CR Cimișeq	067150864 069250864	
8.	Lupșescu Vasile	Arhitect set.	CR Cimișlia	067109741 067488815	
9.	Protocul HGA	Sp. social	UCIPE	149623190	
10.	Vlăduțescu Veniola	Consultant de mediu	Chisinau	069239520	
11.					
12.					

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Hincești

Data: 24 noiembrie 2023

Ora: 13:00

Temei: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 199/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Ecaterina Jingimura	sp. comunicarea	UCIPE	065898460	
2.	Rotaru ALB	sp. proiect	UCIPE	079623192	
3.	Vladimir Vencerlu	consilier de mediu	Chisinau	069239510	
4.	GALUPA ALEXANDRU	SPECIALIST MEDIU SI SOCIAL	KEC	068209313	
5.	Bogos Alina	Secretar al raionului	s. Budești	068029140	
6.	NIRMARENH HUI	Sec. oficez	KEC	062886628	

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Pavelin Victor	șef Serviciu relații furnizor pre și executiv	Consiliul raional Cahul	068101213	
8.	Vasile Ileana	Vicepreședintele cajonului Jinești	Consiliul raional Jinești	067770000	
9.	Burlean Anatolie	Specialist de mediu	UCIPE	068388796	
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MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 200/207

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Primăria mun. Comrat

Data: 29 noiembrie 2023

Ora: 10:00

Temă: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burlacu Anatol	spec. mediu	UCTPE		
2.	Rotaru Alex	spec. social	UCIPE	079623192	
3.	Jungtina Elena	spec. comunicare	UCTPE	069828460	
4.	GALUPA ALEXANDRU	SPREZINTA mediu si social	RTEC INTERNATIONAL	068209913	
5.	NIRMARENDO HUI	spec. asociat	KEC	062186628	Nirmarendo Hui
6.	Molodtso Roman	Legist/ Autoblad King	KEC	060347382	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 201/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Стройкова Ольга	секретарь ком. совет	Премия ком. Светлояр	0672051116	
8.	Душо Е.на	инженер по энергет. работы	Фирма "Светлояр" г. Светлояр	067205417	
9.	Марченко Иван	Примар	г. Светлояр	062018893	
10.	Гуцу Андрей	инженер констр.	г. Комары	069546568	
11.	Калин Иван	зам примара	г. Комары	063289445	
12.	Гуцан Евгений	примар	г. Комары	078864648	

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
13.	Колчан Бѣтр	гл. архитектор Комратского р-на	Администрация Комратского р-на	078100283	
14.	Калсаган В.	примар с. озимна	Примар с. озимна	069218047	
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MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 202/207

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Leova

Data: 28 noiembrie 2023

Ora: 13:00

Temă: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burloacă Anatolop.	Specialist Mediu / S&E	UCIPE	068388796	
2.	Vodicescu Vencelcu	Consultant de mediu		069239520	
3.	Podaru Alex	Specialist social	UCIPE	079623192	
4.	Jungheanu Elena	Spec. comunicare	UCIPE		
5.	ALEXANDRU GALUPA	SPECIALIST PE MEDIU SI SOCIAL	KEC INTERNATIONAL	068209919	
6.	NIRMALENDU HUI	S&E - Mediu	KEC	062186628	Nirmalendu Hui



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 203/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Moldoveanu Roman	Legist	REC	060847282	
8.	Savițki Elena Cojocaru Varile	Primar	Primăria Borogani	068723190	E. Savițki
9.	Cojocaru Varile	proprietor de pământ	Borogani	061013330	
10.	Budnoziuc Soția	perceptor Fiscal	Primăria Borogani	068350258	
11.	Arabadji Veronica	Inginer Cadastral	Primăria Borogani	060529648	Arabadji.
12.	Bodorceanu Mihail	șef adjunct DEPTAI	CR Leova	067480205	Bodorceanu

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
13.	Canatui Nadejda	șef direcție	DEPTAI CR Leova	0263 22990	
14.	Mocanu Ion	sp. superi. DARFIA	CR. Leova	0263 2-27-60 079634568	
15.	Rusalschi Samuel	Arhitect - șef comitetul zonal Leova	Consiliu Raional Leova	078829758	
16.					
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MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 204/207

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Cahul

Data: 28 noiembrie 2023

Ora: 10:00

Temei: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Burlacu Anatol	sp. medm	UCIPE	,	
2.	Protaru Alex	sp. social	UCIPE	079623192	
3.	Jungheanu Elena	sp. comuna	UCIPE		
4.	Molodtsov Roman	Logist	KEC	060205382	
5.	Nurmalendu Hw	SA. Afaceri	KEC	062186628	Nurmalendu Hw
6.	Nedou Ruslan	Vicepreșed. CR Cahul	Consiliul Raional Cahul	079546948	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 205/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Vladimir Vencelcu	Coordonator de mediu	MEPIU Consiliul ex-ante	069239520	V.V.
8.	Bogdan Nicolescu	Specialist Codex	Consiliul Resorțelor	079488284	B.N.
9.	Ioana Anu Eftrosian	Arhitect Șef P.C.A.M.	R. Cahor	079544575	I.A.
10.	Galupa Alexandru	Specialist pe mediu și social	KEC INTERNATIONAL	068208813	G.A.

LISTA PARTICIPANȚILOR LA CONSULTĂRILE PUBLICE

Proiect: PROIECTUL DE DEZVOLTARE A SISTEMULUI ELECTROENERGETIC DIN REPUBLICA MOLDOVA

Componenta A1 & A2: Proiectarea LEA 400 kV Vulcănești – Chișinău și a SE Chișinău

Locație: Consiliul Raional Taraclia

Data: 29 noiembrie 2023

Ora: 13:00

Temă: Evaluarea riscurilor de mediu și sociale la etapa de proiectare tehnică a LEA 400 kV și a SE Chișinău

Temă: Divulgarea și prezentarea informației de mediu și socială părților interesate și menținerea unui proces continuu de comunicare cu părțile interesate prin utilizarea mecanismului de redresare a reclamațiilor (MRR)



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation

The Detailed Design Stage

Page: 206/207

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
1.	Bierlocaș Anatol.	Specialist Iledd4/SSM	UCIPE	068388796	
2.	Protaru Ala	spec. social	UCIPE	079623192	
3.	Junghinș Elena	spec. comun	UCIPE	068828460	
4.	Vlădicăș Vasile	expert		069239522	
5.	Памірепскі Александр	in снейманей.	Отгэнска узямэнбніх откомуну	078214078	
6.	Gurcan Tatiana	primar	primăria comuna Vinogradoveș	068081316	

N. d/o	Nume și prenume	Funcția	Denumirea autorității/ Instituției publice	Date de contact (număr de telefon)	Semnătura
7.	Ильгаренов Зоборан	примар	примария муніципалитет	569520468	
8.	Alexandre Sabauji	Șef Secție de Construcții	Consiliul Local	068828280	
9.	Cuacii Alina	receptor fiscal	Primăria Albota de Jos	078054093	
10.	GALUPA ALEXANDRU	SPECIALIST PE MEDIU SOCIAL	KEC INTERNATIONAL	068208319	
11.	NIRMALENDU HUI	Sr. Oficer	KEC	062186628	Nirmalendu Hui
12.	Ильгаренов Roman	Logist	KEC	060344382	



MEPIU

POWER SYSTEM DEVELOPMENT PROJECT

**The ESIA&ESMP specific for
upgrading the 330/110/35 kV Chisinau Substation**

The Detailed Design Stage

Page: 207/207

6.4 The list of media sources of localities that reflected the public consultations

- <https://raioncomrat.md/29-11-2023g-proshli-publichnye-slushaniya/>
- https://bacioi.md/2023/11/17/_trashed-2/
- <https://cahul.md/anunt-consultari-publice-privind-implementarea-proiectului-de-dezvoltare-al-sistemului-electroenergetic-din-republica-moldova-pentru-constructia-linii-electrice-aeriane-lea-400-kv-vulcanesti-chisi/>
- <https://il.md/2023/11/15/consultare-publica/>
- <https://raioncimislia.md/2023/11/13/consultari-publice-2/>
- <https://hinesti.md/category/informatii-publice/anunturi/>
- <https://raiontaraclia.md/obyavleniya/>
- [Proiectul de Dezvoltare a Sistemului Electroenergetic \(PDSE\) \(mepiu.md\)](#)
- https://www.moldelectrica.md/ro/finances/competitive_energy_market