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Framework for Environmental Assessment Procedures for Power Recovery Project Financed by World Bank in Albania

#### **ALBANIA**

#### **POWER RECOVERY PROJECT**

#### 'FINAL'

# ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

CEZ Shperndarje (PIU)

Date: April 23, 2014



#### 1. INTRODUCTION

The project will support the implementation of the Government of Albania (GoA)'s Power Sector Recovery Program, which is centered around four main pillars: i) resolving existing legal disputes, particularly with CEZ a.s.; ii) enhancing the security of supply through diversification of generation sources, implementing a proper production schedule by OST, the market operator, to balance own imports from Drin River Cascade, power imports and local generation from IPPs and in the future the "Reconstruction of the Medium and Low voltage network and also construction of the substations in Tirana area iii) improving system efficiency in the distribution sector to reduce power losses by at least 20 percent over the next three years and to improve cash collection rates and bad debt provisions; and iv) enhancing regional trade by strengthening the interconnection system.

To support the GoA's program, the project will comprise an investment loan with three main components:

### Component 1 –Securing short term power supply

Albania lacks firm generation capacity to manage weather volatility, furthermore, the Komani HPP on the Drin cascades under maintenance and has a capacity gap of about MW 150/yr over a 3 year period.

### Component 2 – Improving distribution infrastructure

This component will support GoA's and Distribution Company's plan to reduce losses, improve cash collection and reliability in the MV and LV level. The distribution company has finalized a study, conducted by international consultants, assessing the areas of high losses and low collections. The report also includes a proposed action plan to reduce losses over the next six years. The investments are estimated at about \$275 million over the next six years (2015-2020).



The investments will be focused on: i) upgrading the sub-transmission distribution system to improve reliability; ii) targeted investments in the medium voltage grid (6-20 kV); and iii) Targeted investments in the low voltage grid (0.4kV; and iv) upgrading of the company's management and billing and collection system.

#### Five proposed subcomponents will include:

- a) *Upgrading of the sub-transmission distribution system*: Investments in the sub-transmission level are required to upgrade system reliability in Tirana center by reinforcing two existing 35/MV to 110/MV systems.
- b) Targeted investments in the medium voltage grid (6-20kV): The proposed investment will include MV cable lines and MV/LV distribution cabins, as well as associated LV metering facilities at cabins.
- c) Targeted investments in the low voltage grid (0.4kV): Recent CEZ Shperndarje reports show that approximately 250,000 customers have damaged meters or have no meters at all. Under this subcomponent the project will provide financing for the purchase and installation of: (i) approximately 230,000 single and three-phase meters; (ii) low voltage concentric cables; (iii)ABC cables; and (iv) three-phase regular conductor cables.
- d) Upgrading billing and collection system.

### Component 3 - Transmission meter/data center upgrade

In 2011, GoA moved high voltage industrial customers to the deregulated market, this had the effect of reducing the GoA's obligation, through KESh/WPS, to provide guarantees of about US\$ 50 million/yr to KESh (WSP), and put Albania at the forefront of market reforms required by EU directives. The next step in the market reform is to open the market for medium voltage commercial customers, further reducing the public obligation to guarantee supply for regulated tariff customers.

In order to facilitate this process, the project will support OST's to: (i) install meters for medium voltage customers and IPPs and the establishment of a data/meter center at OST, and (ii) facilitate the future deregulated market for eligible suppliers and consumers, and IPPs.



## Component 4 –Introduce priority power sector reforms and project implementation support

GoA recognizes that investments alone will not be sufficient to turn the sector around without critical power sector reforms that will address structural, institutional and operational issues of the sector. In addition to project implementation support, this component will finance technical assistance required to initiate priority reforms to enable the recovery of the power sector.

The environmental and social framework is prepared as a tool for Component 2 of the project which will include investments such as substations (rehabilitation and new construction), underground cables, in different places of the country for improved distribution system. Since the exact locations and the characteristics of the sub-investments under this component is not clear at this stage, the framework document is intended to provide guidance to the PIU for preparation and implementation of environmental safeguard documents.

The procedures presented in this Framework Document detail actions, which will be taken to ensure compliance with Albanian Environmental Regulations and Procedures and the World Bank Environmental Safeguard Policies and Procedures as specified in the World Bank Operational Policies, specifically OP 4.01 (environmental assessment). Since the sub-projects proposed will be conducted in urban areas, no issues related to natural habitats and/or forests are expected. If any sub-project is planned to be constructed in an urban protection land, WB will be consulted and screening of the project will be done accordingly.

The methodology used for the preparation of the framework was based upon the: (i) Review of the existing policies, regulations, operational guidelines and institutional arrangements in Albania to address and mitigate environmental and social impacts of rural roads; (ii) Assessment of the compatibility of the core principles of Albanian regulations and World Bank policies by identifying gaps and presenting recommendations to address them; (iii) Preparation of guidelines for identifying and assessing the nature and magnitude of environmental and social impacts, including preparation of environmental and social screening criteria to



select projects for implementation under PIU and determine the level of social and environmental assessment/studies required; (iv) Suggestions on modalities for the preparation of site-specific subproject mitigation measures.

# 2. BACKGROUND INFORMATION ABOUT NATIONAL LEGISLATION AND WB'S OPERATIONAL POLICIES ON ENVIRONMENTAL ASSESSMENT

#### 2.1. World Bank Environmental Assessment Policy

Under the World Bank EA system (OP. 4.01) projects are classified as Category A, Category B or Category C depending upon estimated potential environmental risk.

Category A project is likely to have significant adverse environmental impacts on human populations or environmentally important areas-including wetlands, forests, grasslands, and other natural habitats, that are sensitive, diverse, unprecedented and/or irreversible. These impacts may affect an area broader than the sites or facilities subject to physical works. Category B project has potential adverse environmental impacts are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

Category B can include different projects with a broad range of potential environmental issues: from projects with quite limited potential environmental issues to projects with potentially important environmental issues that need special consideration to manage properly. In effect, Category B covers any project which is not sufficiently complex and risky to require a full, comprehensive EIA (addressing a wide range of potential issues and including up-to-date environmental baseline data and a detailed analysis of alternatives), but does require some analysis of potential environmental impacts in order to be able to identify appropriate mitigation measures and monitoring indicators. According to the significance of the limited impacts of Category B projects different types of EA documentation could be required. For very simple construction/rehabilitation type



of projects a basic ESMP or an ESMP checklist could suffice, however for the projects which have limited but significant impacts a partial ESA (format will be similar to a detailed ESMP) could be necessary.

Category C projects either do not include any activities which could negatively affect the environment or includes only activities whose potential impacts are easily avoided through application of standard regulations for good construction practices.

As the screening systems differ when compared to national EIA regulation, it is not technically very easy to cross-match the project screening among national and WB system. For example, it cannot be assumed that AppendixI under the national system equates directly with World Bank Category A or Appendix II with Category B. The differences in the two systems may arise, and it is possible for some AppendixI projects to be considered Category B, or conversely, some AppendixII projects to be considered Category A if for example they are planned in sensitive areas. Likewise, some No Annex projects may be screened as Category B especially if they could lead to modest negative impacts to the human or natural environment and the impacts confined to a small region and are temporary or short-lived and these impacts are easy and inexpensive to control (e.g. most of the construction activities).

According to the proposed list of the sub-projects, it was agreed that the underground cables, and the substations will be of Category B<sup>1</sup> nature, as the types of potential impacts are limited and should be relatively easy to assess and mitigate through careful siting and good construction practices.

Details of the EA documentation, public consultation, and implementation arrangements are detailed in the sections below.



#### 2.2. National Legislation

#### Laws and Regulations in the Field of Environment

- Environmental legislation is governed by the Law on Environmental Protection No. 8934, dated September 5, 2002. This Law establishes national and local policies on environmental protection, requirements for the preparation of environmental impact assessments and strategic environmental assessments, requirements for permitting activities that affect the environment, prevention and reduction of environmental pollution, environmental norms and standards, environmental monitoring and control, duties of the state bodies in relation to environmental issues, role of the public and sanctions imposed for violation of the Law.
- Law Nr.9890, dated 20.03.2008 Changes Add to Law No. 8934 "On Environmental Protection".
- Instruction No. 3 dated 12.02.2013 "On the necessary documentation required for environmental License Class A, B, and C for new and existing activities"
- The Law on EIA, No.8990, was approved on January 23, 2003. It defines the rules, procedures and deadlines for identifying and assessing the direct or indirect impacts of projects or activities on the environment. The Law establishes the steps necessary to implement EIA procedures: presentation of the application, preliminary review, selection and classification criteria, public hearing and consultation, access to information, duties and rights of other bodies. The Law also provides the list of activities that should be subject to the Profound and Summary EIA process. It is supported by several decisions of the Council of Ministers and Guidance issued by the MOE. The MOE is the legal competent authority for requesting, reviewing and approving documentation.



The Law on Environmental Impact Assessment (EIA) defines the type and scale of the projects or activities that require an EIA before implementation. The categories of EIA are:

- A Summary (outlined) EIA. This is for projects that may have less significant potential impacts that still require an expert assessment of their impacts. They include projects listed in Appendix 2 of the Law on EIA, and any changes or rehabilitations of projects listed in Appendix 1
- A Profound (advanced) EIA. This is for projects with significant potential impacts, as listed in Appendix I of the Law, those projects listed in Appendix 2 which the MOE considers will have a significant impact on the environment (based on information provided by the proposer at the time of application, in the manner detailed in Appendix 3 of the Law), and activities that are to be implemented in a protected area of the Republic of Albania.

#### Laws and Regulations in the Field of Cultural Heritage and Chance Finds

• Cultural heritage / chance finds: Matters relating to cultural heritage are governed by Law Nr. 9048, "On the Cultural Heritage", dated April 7 2003. This is a very far-reaching law, covering many aspects of cultural heritage.

The Law requires any persons who discover or excavate, at random, objects of the cultural heritage during construction works to suspend work immediately and inform the relevant local authorities within three days. These bodies are then responsible to make the respective check of the objects found, to report on their values and make the proposals on the continuation of the works or halting them for further investigation. These bodies may also decide on any changes or eventual interruption of the works to preserve the objects found. (Article 48).

• If anything unusual could be found during the digging and excavation process the contractor has to stop immediately works, urgently inform the



CezShperndarje PIU of and also the appointed supervisor after CezShperndarje. **Immediately** receiving the information, CezShperndarje, has to inform the Culture Monuments Institute and also the Ministry of Culture. They will send archaeologists and field specialists in order to check and evaluate the supposed archaeological objects and the works could be restart only after the official permit given by the Culture Monuments Institute.

#### Legislation on Construction Permits

For any large construction projects the investors have to consult the relevant authorities during the drafting of the project and applying for construction permission. The experts will check the area and prepare their respective report and any modifications required to accommodate or protect any important cultural objects. The proposal to modify the project must be delivered by the institutions having performed the checking. The expenses for these modifications must be covered by the investors themselves (Article 47).

- Law on forests and the forest service(No. 9385, date 04.05.2005, amended in 2006, 2007, 2008);
- Law on water resources (1996, amended in 1998, 2000, 2001);
- Law on water supply and sanitation regulation (1996);
- Law on protected areas (No. 8897, date16.05.2002, amended in 2008);
- Law on air protection from pollution (No. 8897, date 16.05.2002);
- Law on Environmental Impact Assessment(No. 9010, date 13.02.2003, amended in 2008);
- Law on environmental treatment of solid waste (No. 9010, date 13.02.2003);
- Law on environmental treatment of polluted waters (No. 9115, date 24.07.2003);



#### **Relevant EU Directives**

- Law no.8897, dated 16.5.2002 "On Environment Protection" and Law on Environmental Impact Assessment, In order to be fully in compliance with the EU Directive, is expected to be adopted in 2010 and 2011.
- Albania is transposing of the Integrated Pollution Prevention Control (IPPC) Directive, a draft law which is preparing and expected to be adopted in 2010.
- Albania has designated protection sites under Ramsar Convention (The Convention on Wetlands of International Importance, especially as waterfowl Habitat).
- The LPC Directive is still awaiting direct transposition with Albania
  having passed laws "on air quality" in January 2009, for the accession to
  the Helsinki Protocol and Sofia Protocol to the 1979 Convention "On
  long-range Transboundary air pollution".
- According National Action Plan for the transposition of this Directive is still planned for June 2012.

#### Institutional Framework

- The main responsible institution for climate change issues is the Ministry of Environment, Forests and Water Administration (MoE) established in 2005, a successor of Ministry of Environment which was established for the first time in 2001.
- Several other governmental entities have significant environmental policy roles:



- Ministry of Agriculture, Food and Consumer
- Protection; Ministry of Public Work, Transport and Telecommunications,
- Ministry of Industry and Energy
- Ministry of Health, National Environmental
- National Agency of Natural Resources
- Agency; National Water Council,
- Public Health Institute, Institute of Water,
- Energy and Environment; Council on Territorial

#### Comparison of WB Policies and Albanian Law

The Albania EIA procedures are generally in line with the World Bank's EA process, as all projects require some sort of an environmental screening and possibly assessment in order to receive an Environmental Declaration (for construction), and/or an Environmental Permit (for an activity having an impact on the environment, including some construction activities). Furthermore the type and scale of the impacts the project will have on the environment determine the procedures that have to be followed and the type of approval granted. Also all the approvals include conditions that shall be observed by the proposer including environmental monitoring and mitigation requirements.

The difference lies in the scope of the EIA required for those projects that fall into World Bank Category A and the Albanian Law on EIA Appendix II. Some projects (e.g., wastewater management) are considered as Category A under the World Bank screening, while the same activities/projects under the Albanian Law will require only a Summary EIA for populations less than 150,000, unless the REA decides that the project must undergo a Profound EIA, as discussed above.

Since the proposed project will involve substation rehabilitation / construction and underground cable laying, these will be mostly accepted as either Appendix II or



No Appendix under Albanian Law. However, these will be treated as Category B according to WB Op 4.01. For the sub- projects which are considered as Appendix II according to national law, a Summary EIA will be prepared and approval will be obtained. In addition to that, an ESMP/partial ESA will be prepared to meet World Bank requirements). One public consultation will be held for the sub-projects and if more than one sub-project is planned in the same region, joint meetings could be organized by CEZ.

#### 3. PROJECT SCREENING, DOCUMENTATION, CONSULTATION

#### 3.1. Project Description

As defined in the introduction section above, component 2 of this project includes construction of new substations 110/20 kV and relevant underground HV cable lines for connection with Albanian Transmission Line System. Project will also develop the respective Medium and Low voltage network derived from 20 kV outgoing feeders, which consist on construction of MV underground cable lines, transformer stations and low voltage ABC lines. Moreover, there will be some investments for rehabilitation and upgrading of existing billing system and distribution network managements.

There is a tentative list of investments identified within the scope of the WB project. The list is presented below (table 1). Although the list of investments are in place, the exact route of the cables, transformer station locations/coordinates, exact footprint of the substations, number of outgoing feeder etc. are not defined yet. Further work is necessary for completing their final design/feasibility reports. Therefore the frame work is prepared and as soon as the final designs and feasibility study are ready the sub-project environmental and social documents will be prepared.



Table 1. Potential List of Investments for the Project

П	COMPONENT 2 - IMPROVE THE SYSTEM'S EFFICIECY IN DISTRIBUTION SECTOR
Α	Substations subcomponent
1	Tirana 110/20 kV NST-1 substation (GIS with 2x40 MVA) (including 110 kV 5 km Cable Line and 110 kV Line Bay)
2	Tirana 110/20 kV KOMBINAT substation (outdoor with 2x40 MVA including 110 kV 3 km OHTL)
В	Medium Voltage subcomponent
1	20 kV Metal Clad Switchgears for substations
2	20 kV Cable Line (XLPE AL 3x1x185mm2/240mm2 single phase cable twisted for three phase) and accessories
3	20/0.4 kV Transformation Points (cabins) with 400 kVA Transformer
4	Three phase Meters including CT and accessories (for existing MV/LV Cabins)
C	Low Voltage subcomponent
1	Integrated Single Phase Meters with Plastic Box and Limiters (MCB)
2	Three phase Meters (for non-household LV consumers and for existing metallic collective boxes)
3	Single phase Meters (for existing metallic collective boxes)
4	LV ABC Line (with three phase four conductors cables. Accessories and concrete poles)
5	LV Concentric single phase cables (2x 6 mm2) and accessories
6	LV PVC three phase four conductors (4x95 mm2 and 3x120+95 mm2) and accessories
D	Investment in Billing System (Customer data base, billing, customers care and modern commercial system)

Below map and the pictures are presented to provide a general idea about the sub-project locations.



**Figure 1.** Map showing the potential areas for the sub-projects related to the reconstruction of the Medium and Low voltage network in the area of Bathorre and Paskuqan-Babrru

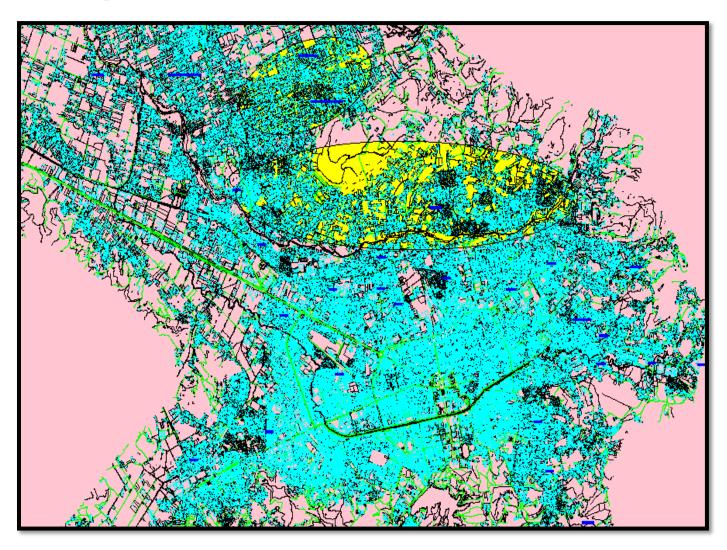




Figure 2. Pictures showing the potential areas for the sub-projects















#### **Summary of potential impacts:**

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The potential impacts related to this project will arise from the substations and underground cables. Both types of projects will have similar impacts and relevant mitigation and measures. The project will consist monitoring construction/rehabilitation of sub-stations in the place of the existing ones to the extent possible. Therefore, no large scale impacts are foreseen rather than usual construction impacts. The impacts will be related to dust, noise, solid waste, wastewater generation during construction activities, habitat loss for the footprint of the substations (for the underground cables this is not a major issue), etc. Occupational health and safety and managing traffic and pedestrian safety during



construction phase is also a critical issue. Impacts during the operational phase are mostly related to SF6 gas management, disposal of waste oils generating from the maintenance works of the substations, etc.

Social implications of the sub-projects should also be considered in the ESMP. Social issues could include public consultation process, required grievance redress mechanism, and brief information related to the land acquisition issues (if any). The ESMP will not go into details of the land acquisition and the mitigation measures; instead it will refer to the land acquisition plan/resettlement action plan if it is required according to the resettlement policy framework (RPF).

As per the project design the concrete investments and the footprints are not yet defined. Potential impacts that could trigger the Operational Policy 4.12 the Involuntary Resettlement Policy - could be investments under the second components if the project will finance new substations and if the location of the new substations is determined to be on the private land or any land that is in use from private persons or entities (in case the new construction is not entirely on the existing sub-station site or the underground cable laying includes some land acquisition from private land). Potentially, also investments such as laying underground cables could lead to temporary land acquisition or right of way agreements with the users of the land if the cable will pass through a private land. Though, the practice is to lay underground cable parallel with the streets and roads. Given the programmatic nature of the project design, the project will finance a set of the investments to be defined during the project implementation, by the appraisal of the project it cannot be defined exact impact or if there will be any impact on private land or land in use or any displacement. Even if it is the case impacts will be marginal. Thus the project has prepared the Resettlement Policy Framework-RPF and this Framework will guide any potential impact which will result on land acquisition either permanent or temporary or displacement or loss of income. During the project implementation if any investment financed by this project will result into land acquisition or displacement the project will prepare site specific Resettlement Action Plan as defined in this Framework.

Impact, mitigation measures and monitoring requirement for the proposed project activities are presented in details as a 'Sample Mitigation and Monitoring Table' as Annex B. This sample table should be used as a guidance tool and the sub-project



ESMPs should be site specific and may have additional/less mitigation and monitoring requirements.

#### 3.2. Documentation

Partial Environmental and Social Assessment (ESA) and/or Environmental and Social Management Plans (ESMPs) for sub-projects will be prepared by consultant/PIU and submitted to WB for review.

A sample format for preparing ESMPs is provided in Annex A (Sample Format for an Environmental and Social Management Plan) of this document. The format will be revised and expanded based on site-specific characteristics. It should be also noted here that the sub-project documents should cover not only the substation footprint area but also the access roads, and the energy transmission lines (ETLs) from the substation to the national grid. For projects which may need a partial ESA, the format will be similar to an elaborated ESMP. The project description section, impacts and mitigation sections should be more detailed in order to provide clear explanation about the significant of the impacts and the residual impacts after mitigation. The necessity of preparing a partial ESA instead of an ESMP and the format of a partial ESA will be decided by consulting the WB.Since the sub-projects will be subjected to prior review by the WB, CEZ will do the initial recommendation to WB to prepare either an ESMP or a partial ESA and their recommendation will be confirmed or revised by WB.

The national environmental clearances (approval of Summary EIA report for Appendix 1 projects) is the prerequisite for CEZ to start working on the ESMP/partial ESA for fulfilling WB requirements. The national approvalshould also be included in the partial ESA/ESMPs. For the sub-projects that required preparation of Summary EIA for the national law, it'll be easy to extract information to prepare the ESMP/partial ESA. There could be some projects which will not fall into any annex under national law, therefore it'll not be required for CEZ to prepare an environmental document for national clearance. In these cases, CEZ will only prepare ESMP/partial ESA and submit it to WB for no-objection.



The no-objection from WB will be a pre-requisite before PIU goes out for tendering process of a sub-project.

If it is decided that the project is Category C, no environmental safeguards Documentation is required. However, an environmental and social due-diligence should be conducted to check the existing environmental conditions of the subproject.

#### 3.3. Consultation

In order not introduce a time limitation for information of the public regarding Category B projects that require ESMP and partial ESA, brochures describing the planned project must be distributed in coordination with PIU/regional directorate, as has been to date; comments and suggestions of people must be collected for minimum 15 days by leaving contact information to village headman's offices; and all these procedures must be included in the ESMP together with any comments and suggestions conveyed.

Project information must be made public through brochures or newspaper announcements, with a note stating that comments and suggestions could be conveyed to the related headman's office. Thus, time limitation for comments and suggestions should be eliminated and communication with public should be facilitated in a broader timeframe.

After preparing the draft ESMP (or partial ESA) documents of the sub-projects, they (English and Albanian) will be sent to the respective Municipality offices together with brochures describing the project.

Thus, the stakeholders (public institutions and organizations, NGOs, local people, universities, etc.) having a view about the project can easily reach and express their requests for more detailed information about the project. Public consultations will be conducted for the sub-projects since all sub-projects are assumed to be Category B in nature. If several sub-projects are planned in the same area, joint public consultations could also be conducted. Documentation of the public consultation meetings to be held for sub-projects will be included in the corresponding



ESMPs/partial ESAs of the sub-projects. Documentation will include but not limited to, invitation announcement, participant list, photos, questions/comments received by public/stakeholders and responses provided.

Public consultation related to the scope of this environmental and social management framework is provided on Chapter 4.



#### 3.4. EA Review and Approval

For all Category B sub-projects English versions of the draft ESMP/partial ESA will be submitted to the World Bank by PIU for review and approval. A sample format of an ESMP/partial ESA is shown in Annex A. There is no environmental review and/or approval procedure for Category C sub-projects (SCADA, etc.). After review and no-objection the ESMP/partial ESA could be accepted as final and the procedures for disclosures could be followed.

#### 3.5. Disclosure

The final ESMP/partial ESA will be opened to public access in the local PIU offices, where it will be convenient to the people living in or near the area where the project is to be implemented. The PIU will make it available on its website as well. The Albanian / English language version will be sent to the Bank for disclosures in the World Bank Infoshop.

If there is a separate physical-cultural asset management plan, it should also be disclosed in Albanian as mentioned above and also should be shared in Infoshop in English.

### 3.6. Implementation Conditions/Obligations

The ESMPs/partial ESAs are commitments by PIU to the World Bank regarding its legal obligation under the Loan Agreement to implement them throughout the life of the project. Thus, prior to contract award to the construction contractor, the PIU will ensure that all bid documents contain conditions (or articles) specifying that the approved ESMP are a part of the conditions to be complied with and must be included in all bid documents and contracts. Since it'll be legally binding by the contractors it should be concise and contain only the required measures, not vague recommendations.



The monitoring of the performance of the contractor during construction will be carried out by the responsible parties specified in the monitoring plan. PIU will be the authority to make the final check with regard to the performance of the Contractor with regard to the relevant specifications in the bid documents and ESMP. For the case of an EIA report (in accordance with Albanian EIA Regulation), PIU will have "first line" responsibility for assurance compliance with conditions of the ESMP. So in case the environmental document prepared for WB is different than the environmental document for national authorities, the PIU is the ultimate responsible agency for auditing and ensuring that the conditions in the Albanian environmental report are complied with, and PIU will be monitoring the works against both national EA and the WB ESMP/partial ESA.

#### 3.7. Environmental Standards/Guidelines

PIU will use Albanian or World Bank environmental standards (whichever is stricter) for the sub- projects.

The criteria and standards can be found in the Albanian Regulations, the Pollution Prevention and Abatement Handbook (PPAH) of the World Bank and International Finance Corporation (IFC) Environmental Health and Safety Guidelines (EHSG). With regard to these issues the requirements of Albanian Regulations will be certainly complied with. If there are no standards or requirements in Albanian Regulations or if the standards of the World Bank are stricter these will be used in construction and operation. The major World Bank documents related to these issues are Bank Safeguard Policies, EA Sourcebook and Updates, and the above mentioned PPAH and EHSG, which are available from the website of the World Bank.

### 3. 8. Institutional Arrangements for Environmental Management

During construction, the PIU, in cooperation with the regional offices, will check the performance of the contractor to assure the works reflects the requirements specified in the ESMPs. If CEZ engages with supervision consultants, they will



also share responsibility with CEZ for supervising the compliance with the national laws and ESMP/partial ESAs. With this regard quarterly reports will be required from the construction contractors and on-site checks will be carried out if found necessary.

PIU will submit the Monitoring Reports (prepared according to the approved Environmental and Social Management Plans) for all Category B sub-projects to the WB to be reviewed in a quarterly basis.

### **4. CONSULTATION WITH LOCAL NGOs AND PROJECT-AFFECTED GROUPS on the ESMF**

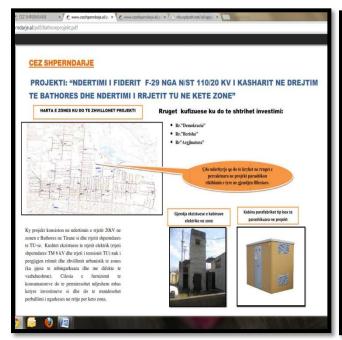
On 14.04.2014, a meeting with local people has been organized at the Project sites. Purpose of the meetings is informing people about the proposed project and provides a summary of impacts and mitigation measures and to discuss about ESMF. The representative of the Project owner presented to the participants the following materials:

- Project description: alignment, undergound cables location, the need of the Project;
- Potential environmental impacts;
- Mitigation measures for the environmental impacts.
- Expressing of comments and hints from resident peoples, completing the comments forms.

Below are photos related to public consultion meeting related to presentation, media annonciation, website publication and all the relevant regords of the public consultating process:

































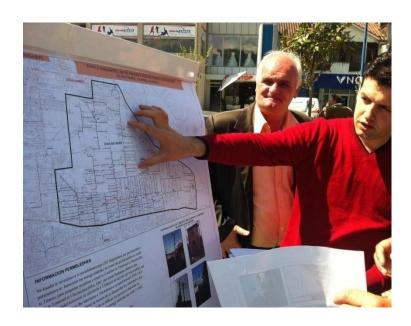




















No.1	Ward	PUBLIC CONSULTATION LOCATION	TIME AND DATE	Number Of People	LIST OF PARTICIPATED OBJECTIVES AND PUBLIC ORGANIZATIONS	SUMMARY OF COMMENTS
1.	Paskuqan municipality	Paskuqan municipality office	8.04.2014	6	1. Elton Kristo (Director of project and study in CezShperndarje) 2. AnilaKasa (environmental specialist in Cezshperndarje) 3. BledarTole (Project inxhinier in cezshperndarje) 4. FatosRexha(deput y municipality chairman) 5. BledarKoskia (chief of urban office) 6. Municipality topography specialist	Meeting with Paskuqan municipality representative Cez representative presented the project and the feedback from municipality representative was very positive. The social and environmental impact during the construction phase has been discussed. Both parties committed to collaborate and make all the efforts for having a successful project implementation process.  Typical questions raised by public: the time schedule of the project (start and finishing date), if there will be any power cutting during project implementation, what will be the project impact to the existing roads.
No .2	WARD	PUBLIC CONSULTATION LOCATION	TIME AND DATE	NUMBER OF PEOPLE	LIST OF PARTICIPATED OBJECTIVES AND PUBLIC ORGANIZATIONS	SUMMARY OF COMMENTS
2.	Paskuqan municipality	In front of the Paskuqan Municipality	8.04.2014 9:00 pm	18	1. Elton Kristo (Director of project and stydy in cezshperndarje)	Residents of the community were informed about the project process and the



		2. FatosRexha	environmental impact.
		(Deputy	Residents of the area,
		ChairmenPaskuqan -	expressed their
		Babrru municipality)	readiness for project
		3. BledarTole	implementation and
		(electrical engineer	improving of power
		planner)	supply.
		4. AnilaKasa	Cezshperndarje
		(environment engineer	prepared one form for
		)	any comments or
		5. AlbanaAllamani	objective the member
		(electrical engineer	community must have.
		planner)	In all forms they
		7. AvniToska	confirm that the project
			is very helpful and urgent one for the
		( resident of Babrru	distribution network of
		center)	the area. They
		8. XhaferLoshi	understood the minor
		(resident of PAskuqan )	project impacts and
		9. MyftarAliu (resident	they give their willing
		of Paskuqan)	for a good project
		10. BinakByberi	implementation
		(resident of Paskuqan)	process. Generally in all
		11. <b>Ali Imeri</b> (resident	they comments they
		of Paskuqan)	express the fully
		12. Ismail Gocaj	accordance with the
		(Residend of Babrru	project scope and the
		Center)	way that
			CezShperndarje is
		13. ArsenHanolli	approaching this.
		(Resident of Babrru)	
		14. YzeirHamitaj	
		(Resident of Paskuqan )	
		15. HazisVlashi	
		(Resident of Babrru)	
		16. Faik Demi	
		(Resident of Babrru )	
		17. HalitLeka(Reside	
		nt of PAskuqan)	
		18. BesimFerati	
		(Resident of Babrru)	
		(Losident of Buollu)	



No.3	WARD	PUBLIC CONSULTATION LOCATION	TIME AND DATE	NUMBER OF PEOPLE	LIST OF PARTICIPATED OBJECTIVES AND PUBLIC ORGANIZATIONS	SUMMARY OF COMMENT
3.	Kamza Municipality	In front of the Kamza Municipality	14.04.201 4 11:00 ppm		1. Elton Kristo (Director of project and stydy in cezshperndarje)  2. BledarTole (electrical engineer planner)  3. AnilaKasa (environment engineer)  4. AlbanaAllamani (electrical engineer planner)  5. MuharremMunoti ( Resident of Bathore)  6. BashkimKoldashi (Resident of Bathore)  7. MislimDrogjashi (resident of Bathore)	Residents of the community were informed about the project process and the environmental impact. Residents of the area, expressed their readiness for project implementation and improving of power supply. Each people fill in the tables approval of the project and willingness of assessment



#### MITIGATION AND MONITORING PLAN FOR SUBSTATIONS and UNDERGROUND CABLES



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
	Cultural and Historical Assets	<ul> <li>In case of coinciding with any cultural asset, the construction will be stopped immediately and the Cultural and Natural Assets Protection Committee will be informed.</li> <li>Until the response is taken, any action will not be done at the site.</li> <li>After taking the positive response (no cultural assets) the construction will continue.</li> </ul>	No additional cost	Contractor	Start of Construction Works	Completion of construction works
	Dismantling of the existing substation (valid for substations)	<ul> <li>All redundant equipment and waste will be collected separately and whenever possible, these materials will be recycled by a licensed firm.</li> <li>Asbestos containing materials will be disposed of by the firms licensed for hazardous waste disposal</li> </ul>	Included in the construction contract	Contractor	Start of the dismantling works	Completion of the dismantling works
CONSTRUCTION	Dust – Particulate Matter	<ul> <li>The regulated limit value of Dust/Particulate matter emission being 3 mg/Nm³ (Industrial Air Pollution Control Regulation) is not to be exceeded.</li> <li>Watering will be done in the dry seasons</li> <li>Loading and unloading will be carried out with care and without scattering. In order not to lead to scattering, loading/unloading works will be performed in an area allocated for loading/unloading and water sprays will be used in loading/unloading area. Moreover, the workers are warned being careful about loading/unloading activities. Windy weathers will not be selected for loading/unloading if it is applicable.</li> <li>The trucks will be covered with canvas, etc. and speed limitation will be applied. Speed limit on trucks is 30 km/hr (at project site) and 50 km/hr (outer of the project site – within the city)</li> <li>Only vehicles with emission stickers will be used</li> <li>Tires of the trucks will be cleaned where necessary to prevent dirt being carried onto the roads</li> </ul>	Included in the construction contract	Contractor	Start of the excavation work	Completion of the excavation works



		MITIGATION TABLE								
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date				
CONSTRUCTION	Noise	<ul> <li>All construction works will be done between 7am and 7pm. If it is required to work after 7 pm, local authorities and public will be informed about these working hours.</li> <li>People, living at the population centers around, will be informed about the working durations</li> <li>The continuous work-site noise (day times) will be ensured to be under 70 dBA (according to the Albanian Regulation on Assessment and Management of Environmental Noise.</li> <li>To satisfy this;</li> <li>The construction machines (vehicles) inspection, maintenance and oiling will be done in time and periodically, and the items resulting in noise will be replaced.</li> </ul>	No additional cost	Contractor	Start of Construction Works	Completion of construction works				



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
	Wastewater	Wastewaters due to work-site will be given to the sewerage system of the Province by the connection to the sewerage system.	Included in the construction contract	Contractor	Start of Construction Works	Completion of construction works
	Excavation wastes will be deposited to the excavation wasted disposal area licensed by the relevant municipality.     Solid wastes (construction materials such as metal, wood) an packaging wastes (plastic, paper, glass etc.) will be systematically and separately collected and it will be ensured to be taken by Municipality or a licensed recycle firm.     Organic domestic wastes due to worker/personnel will be collected separately and it will be ensured to be taken be Relevant Municipality and disposed to Solid Waste Disposal Area locating near Village.     Hazardous wastes such as oil, dye etc. will be collected separately in leak proof, metal and labeled containers and will be ensured to be taken by a licensed firm ensured by the Contractor      Maintenance of the vehicles will not be done at the project site unless there is an emergency situation     Waste oil due to construction machines and vehicles will be collected in rustless barrels and will be sent to a licensed firm by the contractor.      The barrels will be placed onto an impermeable ground to protect them from rain and sun and all necessary precaution against fire will be taken. The area where the barrels are placed will be surrounded with the warning sign. Firefightin set (bucket, axe, shovel, pickaxe, and anchor) will be at the area.      Batteries, tires and similar items due to construction machine and vehicles will be sent to a licensed firm for final disposal.		Not high (changing by depending on municipalities and/or licensed recovery plant)	Contractor	Start of Construction Works	Completion of construction works
			Not High	Contractor	Start of Construction Works	Completion of construction works



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
CONSTRUCTION	obeyed within the work-site area during the construction works, risks and related regulations will be provided to all workers before the construction works start.  • The work-site will be restored.		Within project budget	Contractor	Start of Construction Works	Completion of construction works
	Landscape	<ul> <li>The work-site will be restored.</li> <li>No hazardous, solid, liquid, construction wastes will be left at the site.</li> </ul>	Within project budget	Contractor	Completion of construction works	Taking the substation into operation
CONSTRUCTION	Habitats (flora/fauna)	<ul> <li>All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.</li> <li>A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided</li> <li>Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences</li> <li>There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</li> </ul>	Within project budget	Contractor	Start of construction works	Taking the substation into operation



		MITIGATION TABLE									
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date					
CONSTRUCT	Traffic and Pedestrian Safety	<ul> <li>In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to:</li> <li>Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards</li> <li>Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.</li> <li>Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement</li> <li>Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.</li> <li>Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.</li> </ul>	Within project budget	Contractor	Start of construction works	Taking the substation into operation					



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
	Social	Land acquisition (if any) and Grievance process will be guided by the Resettlement Policy Framework	Within project budget	CezShperndarje, MoEI	Start of construction works	Taking the substation into operation
	Social	For any potential construction of substations once the preliminary decision is made , neighborhoods will be consulted	Within project budget	CezShperndarje, MoEI	Start of construction works	Taking the substation into operation
OPERATION	Noise	The limit values (L <sub>daytime</sub> :65 dBA, L <sub>nightime</sub> :55 dBA) regulated in Albanian Enivronmental Noise Evaluation and Control Regulation will not be exceeded. To satisfy this limits;  Equipments forming the substation shall be specified in the bid documents and supplied in accordance with the International Electrotechnical Comission (IEC) 60076-10 and other international standards (For 154 kV transformers≤60 dBA at source/For 380 kV transformers≤70 dBA at source).	Within the operation budget	PIU  Transmission Network  Operation  Maintenance  Department	Taking the substation into operation	Completion of the economic life of the substation



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
OPERATION	Electro-Magnetic Field (EMF)	<ul> <li>The limit values (5 kV/m for electric field/for public, 1000 mG for magnetic field (24 hours/day); 10 kV for electric field/for labors, 5000 mG for magnetic field (8 hours/day)) mentioned in International Commission on Non-lonizing Radiation Protection (ICNIRP) will be complied with. In order to satisfy this limits the following will be conducted;</li> <li>As specified in the bid documents, all the equipments of the substation (transformer, disconnector, circuit breaker, surge-arrester, current transformer, voltage transformer etc.) will be taken according to the International Electrotechnical Commission (IEC) and other international standards and the controls and maintainance (strengthening by renewal) will be done in accordance with IEC.</li> <li>The substation will be surrounded by the wall and fence. Therefore, enterance, approach, and settlement would be avoided.</li> <li>The substation building, equipments, wall and fence will be grounded. In any case of sign of a failure (such as failure in the operation of an equipment, increasing the contact current, electrical arc, local warming etc.) the grounding resistance will be measured and according to the measurment results the grounding of the ones having the problem will be strengthened by local rehabilitation, maintaning the continuity of the connections etc.</li> </ul>	Within the operation budget	PIU	Taking the substation into operation	Completion of the economic life of the substation



		MITIGATION TABLE				
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date
	Health and Safety	<ul> <li>The personnell will be selected from the people having trained in first aid, electric safety, working at high levels for the maintanace of the substation</li> <li>The warning signs and climbing barriers will be placed around the substation.</li> </ul>	Not high (as a part of operation budget)	PIU PIU District Office	Taking the substation into operation	After the completion of the economic life of the substation
OPERATION	measurement and gas leakages will be control of gas leakage (before SF6 gas density drops be	measurement and gas leakages will be controlled. In the case of gas leakge (before SF6 gas density drops below the critic level), the bay will be shut down (closed) and that part will be	Not high (as a part of operation budget)	PIU  Transmission Network  Operation  Maintenance  Department	Taking the substation into operation	After the completion of the economic life of the substation
	Fire Risk	The substation which will be established as to the fire safety elements in the "Electric Intensive Current Plant Regulation" shall be controlled regularly and all equipment shall be controlled, maintained, tested, rehabilitated and renewed (in terms of the parameters like bushing, SF6, isolation oil, cable ends and gas leakage).  All eqipments will be tested according to the national and international standarts againts arc and sparks.	Not high (as a part of operation budget)	PIU  PIU District Office  Transmission Network  Operation  Maintenance  Department	Taking the substation into operation	After the completion of the economic life of the substation



		MITIGATION TABLE					
Phase	Subject	Mitigation Measures**	Cost	Responsible Institution*	Start Date	Finish Date	
	<ul> <li>Substation oil will be analyzed physically and chemically (density, acidity, viscosity, corrosive sulfide, flash point, PC color).</li> <li>When the oil completes its economic life, it will be replaced with new one and disposal of it will be ensured by conducti required tests (to determine the category of the oil) and applying proper disposal method as to the category test reservices.</li> <li>PCBs will never be used as replacement oils.</li> </ul>		Not high (as a part of operation budget)	PIU  PIU District Office  Transmission Network  Operation  Maintenance  Department	Taking the substation into operation	After the completion of the economic life of the substation	
	Solid-Liquid and Hazardous Wastes	<ul> <li>Solid wastes, junk materials and construction wastes will be collected seperately and they will be ensured to be taken by the Relevant Municipality or a licenced firm</li> <li>Wastes such as oil, dye will be collected in separate, impermeable, metal and labeled conteyners and will be ensured to be taken by a licenced recycle firm</li> </ul>		PIU PIU District Office	Taking the substation into operation	After the completion of the economic life of the substation	
	Social	<ul> <li>The project will establish citizens feedback mechansim to adress grievencess durign the operation and any other proejct related grievency.</li> </ul>	As a part of operation budget	CEZshperndarje	Taking the substation into operation	After the completion of the economic life of the substation	

<sup>\*</sup> Valid in the case of handing over of the proposed works to subcontractors. Otherwise, responsibilities defined for contractor will belong to PIU



<sup>\*\*</sup> While taking the proposed measures, compliance with all related regulations (Air Quality Evaluation and Control Regulation, Water Pollution Control Regulation, Environmental Noise Evaluation and Control Regulation, Solid Waste Control Regulation, Soil Pollution Control Excavation, Construction and Demolition Wastes Control Regulation, Hazardous Waste Control Regulation, Package and Packaging Waste Control Regulation, Grounding in Power Installations Regulation, Work Health and Safety Regulation, Health and Safety Conditions on Usage of Work Equipment Regulation) will be complied

		MONITORING TABLE								
<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where the parameters would be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
	Cultural and Historical Assets	Cultural assets at the site	Construction site	Visual	In case of coinciding a cultural asset continuously by an archeologist	Obeying the Cultural and Natural Assets Protection Law	Not high if no cultural assets are damaged	Provincial Culture and Museum Directorate	Start of the construction works	Completion of construction works
Construction	Dismantling of the existing substation (valid for substation)	Substation components & installation  Redundant equipment and wastes	Construction site	Visual	During the dismantling activity	Related Environmental Laws and Regulations	No additional cost (within the project budget)	PIU District Office	Start of the demolishment activities	Completion of the demolish activities
	Dust – Particulate Matter	Dust Formation due to the Movement and Exhaust of the Construction Machinery (mg/Nm³)  Complaints from public	Construction site	Visual inspection  Interviews with the local people near the site	During the excavation period / intense construction works, weekly/ in the case of complaint	Industrial Air Pollution Control Regulation	No additional cost (within the project budget)	PIU District Office	Start of construction works	Completion of construction works



		MONITORING TABLE								
<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where the parameters would be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Construction	Noise	Complaints from public Noise Level (dBA)	Construction site	Interviews to be conducted in near residential areas  Noise level measurement with noise meter (sound level meter)	Observation (weekly)  In the case of complaint from public	Environmental Noise Evaluation and Control Regulation	Not High	PIU District Office	Start of the construction works	Completion of construction works



				MON	IITORING TABLE					
<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where the parameters would be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Construction	Wastewater	Connection to the sewerage system,  Contamination in the water and/or soil in the substation area	Connection to the sewerage system Substation area	Visual (Wastewater generated by the workers will be given to the sewer system of the city. The connection to the sewer system and whether any wastewater is discharged to soil, water or to any receiving body expect the permitted one will be observed and controlled)	Weekly (irregular controls)	In accordance with the Water Pollution Control Regulation and Soil Pollution Control Regulation	No additional cost (within the project budget)	PIU District Office Municipality	Start of the construction works	Completion of construction works



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Construction	Excavation, Solid and Hazardous Wastes	Storage and disposal conditions	Construction site and disposal site	Visual	Weekly (irregular controls)	Compliance with Conservation of Habitat Regulation, Solid Waste Control Regulation and Soil Pollution Control Regulation, Hazardous Wastes Control and Waste Oil Control Regulation	No additional cost	PIU District Office Contractor Municipality	Start of the construction works	Completion of construction works
Construction	Wastes due to Vehicle Parking	Waste oils, automobile batteries, used tires and junk electronic materials	At the vehicle parking area	Visual Inspection and control of vehicle maintenance documents	During the failure and regular maintenance	Achievement of the disposal of the wastes compliance with Waste Oil Control Regulation, Waste Battery and Accumulators Control Regulation, End-of-tires Control Regulation	No additional cost	Contractor	Start of the construction works	Completion of construction works



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
	Health and Safety	Documents related to workers health and safety training  Equipment used by the worker during working for construction (hard hat, gloves, safety belt etc.)  Work practices	Construction sites	Visual	Beginning of the each work stage  Daily	In accordance with Labor Health and Occupational Safety Regulation	No additional cost (within the project budget)	PIU District Office	Start of the construction works	Completion of construction works
Construction	Landscape	Wastes (construction, solid, hazardous, liquid) are left at the site, the excavated areas	The project area	Visual	During closing the construction site	Compliance with Environmental Law and Regulations	No additional cost (within the project budget)	PIU PIU District Office	Start of the construction works	Completion of construction works



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
	Habitats	Any adverse impact on flora and fauna at the project area	The project area	Visual	Continuous	Compliance with Environmental Law and Regulations and ESMP	No additional cost (within the project budget)	PIU PIU District Office	Start of the construction works	Completion of construction works
	Traffic and pedestrian safety	Installation of signs, speed of vehicles, etc.	The project area	Visual	Continuous	Compliance with Environmental Law and Regulations and ESMP	No additional cost (within the project budget)	PIU PIU District Office	Start of the construction works	Completion of construction works
	Social  Land acq.  Grievance	The process will be guided through RPF	Project area	Public relations	Continuous	To check the compliance with the Resettlement Policy FW	Included in operation budget	CEZ shperndarje	Start of construction	Until completion of economic life of project
Operation	Noise	Noise level (dBA)  Public complaint	At the border (wall) of the substation Near residential areas	Interviews with the local people	In the case of complaint	Control of the limit values determined in the related regulation	Not High	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
	Electromagnetic Field Strengths	Distance between the substation and the wall/fence  Documents related to the equipment procurement  Grounding resistance (ohm)	Within the substation and substation area	Visual observation  Interviews with the people at the near residential areas  Grounding measurement	Taking the substation into the operation  Any problem, failure in the grounding	Control of satisfying the national and international referance values	Not High	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation
Operation	Health and Safety	Technical training in terms of operation and maintenance  Protective equipment and clothes (whether usage or not)	The substation area	Visual	Maintenance works (proper periods)	Compliance with related health and safety regulations	No additional cost (within the operation budget)	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Operation	SF6	SF6 gas pressure	All bays	With pressure meter	During the operation (continuously)	Compliance with the Environmental Law and Regulations  Innecessaty of operation	No additional cost (within the operation budget)	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation
Operation	Fire Risk	SF6 gas pressure  cable ends  isolators  cable connection points  Primary and secondary controllers	Substation area	Technical tests and standard maintenance tests performed by the controllers	Semi-annually / in the case of maintenance, control and failure	Due to fire risk  To comply Electric Intense Current Plants Regulation requirements related to fire safety, to repair the worn, broken parts, to minimize the risk of accident and to prevent the outage	No additional cost (within the operation budget)	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	the	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Operation	Substation Oil	Oil characteristic parameters (density, acidity, viscosity, corrosive sulfide, flash point, PCB, color)	Transformers	Physical, chemical analyses done by PIU Test Laboratories	Bi yearly/daily, weekly, monthly in the case of failure	Quality control of the substation oil	Not high (within operation budget)	PIU District Office	Taking the substation into operation	Completion of the economic life of the substation



<u>Phase</u>	Subject	What are the parameters, which would be monitored?	Where would the parameters be monitored?	How would the parameters be monitored?	When would the parameters be monitored - frequency of the measurements?	Why would the parameters be monitored?	Cost	The Institute that controls – frequency of the control	Start Date	Finish Date
Operation	Solid-Liquid and Hazardous Wastes (automobile accumulator, substation oil)	Contamination within the area of substation (wastes, smell etc.)  Defective equipment wastes  Contaminants in the waste substation oil (Arsenic, Cadmium, Lead, Total Halogens, PCBs, Flashing point)	Substation area	Visual	During the operation period  In the case of defection, failure, completion of the economic life of the equipment  Completion of the economic life of the substation oil	Compliance with Conservation of Habitat Regulation, Solid Waste Control Regulation and Soil Pollution Control Regulation, Hazardous Waste Control Regulation  Compliance with Waste Oil Control Regulation	Not high (changing by depending on municipalities and/or licensed recovery plant)  Not high (depending on the firm/laboratory conducting the analysis)	PIU PIU District Office  Municipality  Provincial Directorate of Environment and Forestry	Taking the substation into operation	Completion of the economic life of the substation
	Social Grievance redress mechanism	Records of grievances	At construction site	public relation	Continuously	To check the compliance with the Resettlement Policy FW	Included in operation budget	CEZshperndarj e	Start of construction	Until completion of economic life of project



