EBRD COVID-19 Resilience Framework - Environmental Social Assessment Training Programme

Video 2 – Electrical supply and distribution sectors

June 2020

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Introduction

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Introduction

The purpose of this training video is to illustrate how EBRD's Environmental and Social Policy (2019) and the accompanying Performance Requirements can be applied during an environmental and social assessment of a Project within the electrical supply and distribution sectors.

The example used is the upgrade and automation of existing electrical substations.

Introduction to the Project

Key facts:

- 10 electrical substations will be upgraded and automated.
- Aim is to improve the reliability of electricity for businesses and residents.
- Due to the automation of substations workforce retrenchment is required.

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Application of the PRs

EBRD Performance Requirement		Applicability and justification
1	Assessment and Management of Environmental and Social Risks and Impacts	Yes – category B Project. A detailed environmental and social assessment was completed.
2	Labour and Working Conditions	Yes – due to the use of a workforce for the upgrade works and from a future workforce retrenchment programme. Contractor management is also required.
3	Resource Efficiency and Pollution Prevention and Control	Yes – due to the Project's use of resources (water, materials, fuels, aggregate) during construction, and from the presence of hazardous substances such as polychlorinated biphenyl and sulphur hexafluoride (SF6).
4	Health, Safety and Security	Yes – from the use of road vehicles, hazards to workforce from the upgrade and future maintenance of electrical equipment, worker exposure to electromagnetic fields, and risks from multiple heavy lifts.
5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	No – all of the upgrade works will take place within the physical boundaries of the existing substation facilities.
6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	No – no additional land is required.
7	Indigenous Peoples	No – there are no people in the project area that meet the PR7 applicability criteria.
8	Cultural Heritage	Yes – the project involves new excavations and potential damage to cultural heritage artefacts.
10	Information Disclosure and Stakeholder Engagement	Yes – a comprehensive public disclosure and consultation process was undertaken. Key stakeholder concerns include future job losses due to automation of the substations.

Application of the PRs

Using the Project we will explore the application of:

- PR2: Labour and working conditions
- PR3: Resource Efficiency and Pollution Prevention and Control
- PR4: Health, Safety and Security
- PR8: Cultural Heritage

One of the substations contained murals from the Soviet era, including this example reflecting the culture of rural life and the natural environment.

Task 1 – Review of existing documentation

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Task 1 – Review of existing documentation

The following was requested from the Client:

PR2: Labour and working conditions

- Human resource policies and procedures, details of the current and future workforce, retrenchment planning documents

PR3: Resource Efficiency and Pollution Prevention and Control

- Site investigation reports
- Hazardous substances inventory and management plans

PR4: Health, Safety and Security

- Project risk assessment / register
- Documented safety procedures for work on live electrical systems (safe approach distances, authorised persons, access control, PPE specifications)
- Asbestos survey and hazard control procedure
- Emergency preparedness and response plan
- Contractor management procedure

PR8: Cultural Heritage

- Chance finds procedure
- Cultural heritage management plan

Task 2 - Site visit and discussions

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PR2: Labour and working conditions

- Worker interviews indicated that existing substations are too hot/cold which has lead to previous complaints.
- Lack of women in the workplace.
- Worker grievance mechanism implemented.
- Over 230 staff to be made redundant in the future due to automation of substations.

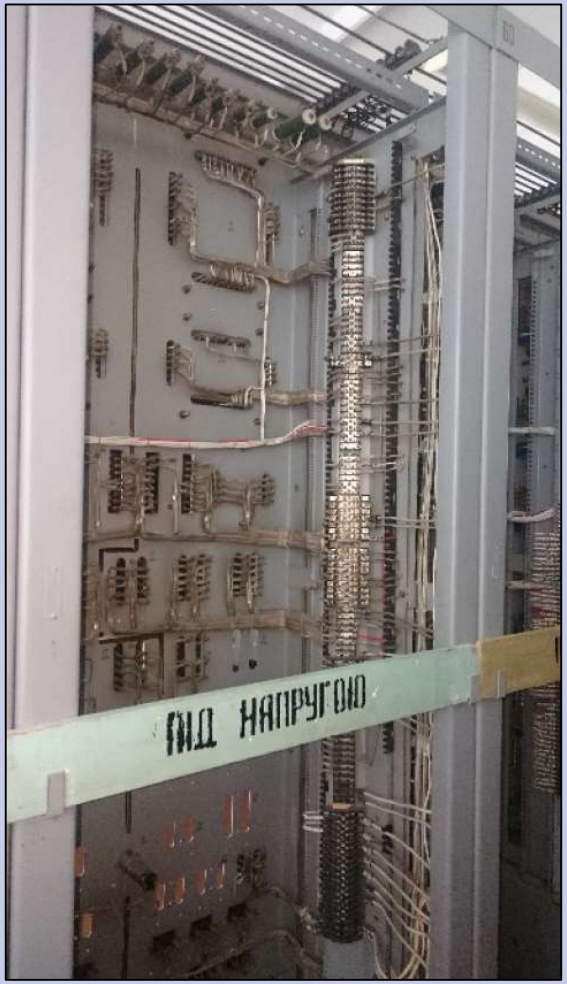
NOTE: PR2 Requirements (paragraph 20): analysis of alternatives, develop and implement a plan in accordance with national law and GIP, fair and transparent selection process, grievance mechanism, extensive consultation.

PR3: Resource Efficiency and Pollution Prevention and Control

- Potential for soil and groundwater pollution to have occurred from leaking tanks containing transformer oil
- Third-party waste management companies collect and dispose of old electrical equipment although no audits have been undertaken by the Client
- Some sites experience significant flood events due to a lack of adequate drainage
- Sites are currently handling sulphur hexafluoride (SF6):
  - A gas widely used to prevent short circuits (electrical insulator)
  - 23,500 times the global warming potential of carbon dioxide
  - Banned across the EU for any use apart from as an electrical insulator

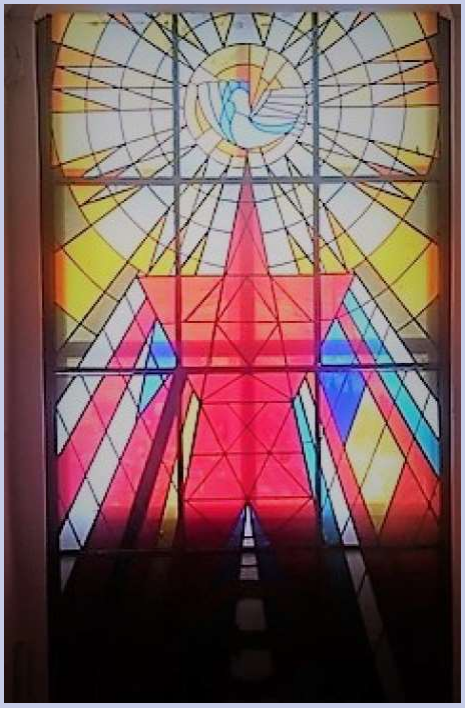
PR4: Health, Safety and Security

- Contractors involved in decommissioning and installation of new infrastructure
- Parts of the substation will be ‘live’ during the works.
- Existing fire fighting systems will be upgraded for use by the new facilities
- Surrounding buffer area needed to prevent exposure to the public (EMF, noise)



PR4: Health, Safety and Security

PR8: Cultural Heritage



Stained glass window including a dove seated at the top of an electrical transmission tower

Outdoor mural of a worker holding a shining bulb

- Artefacts date from 1962 and are in good condition
- May be damaged during upgrade works
- No public entry to the substations
- There is a Soviet Cultural Art organisation within the Ministry of Culture
- Options include renovation, protection and potential removal for future public access, or a photographic display with information cards

Task 3 – Analysis and reporting using the EBRD format

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Task 3 – Analysis and reporting using the EBRD format

The following gaps were identified that needed to be addressed in the ESAP:

1. Prepare a retrenchment plan.
2. Implement a soil and groundwater investigation programme.
3. Undertake audits on third-party waste management facilities.
4. Improve drainage and flood risk management at specific sites.
5. Prepare a sulphur hexafluoride management plan.
6. Install secondary containment bunds for hazardous liquid storages.
7. Prepare a cultural heritage management plan through consultation with stakeholders (government authorities and local residents).

Task 3 – Analysis and reporting using the EBRD format

The following gaps were identified that needed to be addressed in the ESAP:

1. Update the risk assessment to include all Project risks including the use of contractors.
2. Improve, update and implement safety procedures.
3. Audit and upgrade existing fire fighting systems.
4. Develop a contractor management plan (supervision and oversight activities).
5. Identify and remove asbestos before works commence.
6. Undertake a structural assessment of all poles, supports and brackets, and use results to prepare a method statement for removal of old conductors to reduce risk of collapse.
7. Develop a lifting plan to include authorised routes and locations for mobile plant and cranes, and safe approach distances for workers.

Application of the PRs

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