

Environmental Monitoring Report

2016 2nd Semestral Report
January 2017

ARM: Power Transmission Rehabilitation Project

Prepared by the High Voltage Electric Networks (HVEN) Closed Joint Stock Company(CJSC) for the Republic of Armenia and the Asian Development Bank (ADB).

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
RA	Republic of Armenia
MNP	Ministry of Nature Protection
HVEN CJSC	Voltage Electric Networks Closed Joint Stock Company
PIU	Project Implementation Unit
PSMC	Project Supervision and Management Consultant organization
LEECC	Liaoning- EFACEC Electrical Equipment Co., LTD
IES	International Environmental Specialist
IEE	Initial Environmental Examination
EMP	Environmental Management Plan
CEMP	Contractor's Environmental Management Plan

PART I INTRODUCTION

This Bi-annual Environmental Monitoring Report covers the time period between July and December of 2016.

The Report was prepared with close cooperation with Project Supervision and Management Consultant (PSMC), which is the joint venture of Italian CESI S.p.A, INCICO S.p.A.

Power Transmission Rehabilitation project will increase the efficiency of power system operation and reduce transmission losses, which are essential to improve operational energy security and reduce emissions of greenhouse gases. Rehabilitation of existing substations will improve the reliability and quality of power supply to urban and rural consumers, alleviating regional disparities within Armenia and supporting inclusive and sustainable economic development. In addition, an efficient and reliable power system will facilitate expanding cross-border power trade in the region.

The Project covers the following components: **Rehabilitation and Extension of four High-Voltage (HV) Grid Substations.** This component covers the substations Agarak 2, Shinuhayr, Yeghegnadzor and Ararat 2. Agarak 2 and Shinuhayr substations (Lot 1) will be financed by ADB.

The rehabilitation of the substations includes the installation of new autotransformers (only in Agarak 2), replacement of obsolete voltage transformers, surge arrestors, circuit breakers, disconnectors, post insulators, steel gantries, towers (supports) and foundations, control & monitoring equipment, protection equipment, batteries and other secondary systems. The rehabilitation of "Agarak 2" and "Shinuhayr" substations will be from 2016 up to end-2018.

On 5 September 2014 project Loan Agreement was signed between Republic of Armenia (Borrower) and Asian Development Bank in the amount 23.400.000 USD. Co-financing part (taxes and duties) is the responsibility of HVEN.

The project classified as environmental "B" category.

The Project will be implemented by High Voltage Electric Networks Closed Joint Stock Company (HVEN CJSC) who will be the Project Executing Agency, according to the Loan Agreement.

The Project Implementation Unit (PIU) in HVEN will manage the project on behalf of HVEN.

The Construction Contractor Liaoning- EFACEC Electrical Equipment Co., LTD (LEECC) & Northeast China International Electric Power Corporation (NEIE) JV.

1. Construction Activities and Project Progress During Reporting Period

To perform the construction works at the Agarak-2 substation as a subcontractor "Energanorogum" CJSC was hired by the General Contractor (Contract No. AGARAK/CW-2016/001 dated 19.12.2016).

During the reporting period the no construction activities were implemented.

2. Environmental Safeguards Staffing

The Project Implementation Unit is implementing day-to-day management of project execution. The PIU includes an Environmental team whose responsibilities include the management of all environmental aspects of the project.

The Project Supervision and Management Consultant (PSMC) is providing Technical Assistance to the PIU in the management and reporting of the project. Environmental Specialist of the PSMC is responsible for supervising the construction works in relation to environmental and, in particular, for supervising and reporting on the Contractor's performance in the implementation of the EMP.

Contractor is responsible for implementation of construction works. Contractor's Environmental Unit is responsible for implementation of the EMP, as well as preparation and implementation CEMP and SEMP, monitoring of the construction activities and reporting.

2.1. PIU environmental team

PIU Environmental activities are undertaken by Chief Environmental Specialist of HVEN and Environmental Specialist:

Mr. Tigran Oganezov – HVEN Chief Environmental Specialist is responsible for the compliance of the projects to ADB's Environmental Policy and RA Legalization. He was employed as part time employee since 1 of August 2016.

Mrs. Hasmik Khachoyan– HVEN Environmental Specialist is responsible for the compliance of the projects to ADB's Environmental Policy and RA Legislation. She is a full-time employee since 1 of August 2016.

2.2. The PSMC Environmental Unit

Presently the PMC Environmental Safeguard Unit consists of:

Mrs. Nicoletta Cremonesi the International Environmental Specialist (IES) is responsible for the provision of consultation on international best practices on environmental safeguards. During the reporting period she prepared and submitted the mid-term project performance monitoring and evaluation report for Contract.

2.3. The Contractor's Environmental Unit

The Contractor's Environmental Unit is consists of:

Mrs. Armine Hayrapetyan – Contractor's Local Environmental Specialist is responsible for the preparation of Contractor's Environmental Management Plans (CEMP) for Agarak-2 and Shinuhayr substations.

PART II ENVIRONMENTAL MANAGEMENT

3. Environmental Safeguards Program

3.1 Compliance with National Safeguards

3.1.1 In the reporting period it was managed that all project activities will comply with all national pertinent environmental laws and regulations.

3.1.2 Contractor ensures that preparation of CEMPs will comply with all national pertinent environmental laws and regulations.

3.1.3 Contractor ensures all necessary communication with local (communities) and territorial administrative authorities/marzes (if needed) to comply with Armenian legislation during construction and obtains permits and approvals for any use waste dumping.

3.2 Compliance with ADB Safeguards

3.2.1 In the reporting period Contractor ensures that all project activities, included preparation of CEMPs will comply in accordance with ADB Environmental Policy and RA legislation.

3.3 Contractor's Compliance with the EMP

3.3.1 Contractor is guided by the IEE and EMP for the project as a part of the Bid and Contract documents.

3.3.2 The final draft version of Contractor's Environmental Management Plans for Agarak-2 and Shinuhayr substations were prepared by the contractor and submitted to the PIU and PSMC for further reviewing and approval. The CEMP give the Contractors vision on site environmental management requirements, implementation and management, particularly construction impacts mitigation, monitoring and reporting requirements in order to ensure the environmental performance.

3.4 The project Environmental activities and communication between Project entities

During the reporting period PSMC was organized several environmental meetings to ensure the process of preparation of requested CEMP by project General contractor.

The first meeting was held on 9th of September, 2016 among PIU, PSMC and Contractor in the HVEN office. The main issue of the meeting was discussion on the draft version of CEMP presented by the Contractor. During the meeting LEEEC Site Implementation Manager has introduced its HSE manager- Mr. Jia Dong who submitted a preliminary version of the CEMP, which was quickly

reviewed by the PIU environmental and Consultant teams and a conclusion was made that it was just a very short abstract with very general information. The Chief environmental specialists of the PIU and the Consultant Team leader explained in the detail to the Contractor the topics that shall be developed in the EMP, they also mentioned that the CEMP will be developed 28 days before the construction works start based on the IEE, as well as on Contractors own studies. As a result it was suggested to the Contractor hire the local environmental specialist for preparation of CEMP for the Agarak-2 and Shinuhayr substations and further monitoring of implementation of CEMPs.

The second environmental meeting was conducted on 10th of October, 2016. The Contractor introduced their new Local Environmental Specialist, Armine Hayrapetyan, who prepared the updated draft version of the CEMP, both for Agarak-2 and Shinuhayr. The CEMP was based on the IEE and the preliminary EMP prepared by FICHTNER and integrated with the outcome of the visits to the sites that Ms Armine Hayrapetyan did. The PSMC environmental specialist Mrs. Nicoletta Cremonesi and PIU environmental team gave to the Contractor their quick comments and suggestions on presented CEMPs and decided to present their full scale comments and suggestions after the detailed review of the draft versions of CEMPs and planned joint site visit to the Agarak-2 and Shinuhayr substation during the next meeting on 13th of October.

After the joint site visit to the target substations on 11th and 12th of October the PSMC organized the next environmental meeting to present the results of joint trip and his detailed comments on draft versions of CEMPs. As a result of the meeting the time-schedule for preparation, submission, reviewing and approval of the CEMPs for Agarak-2 and Shinuhayr substations was developed and agreed by the meeting participants.

During the reporting period the PSMC asked to the PIU for the several information which are required for the updating the preliminary EMP prepared by FICHTNER. The PSMC was provided with the information on the quantity of dielectric oil, batteries which were already removed from and still stored in substations from May 2014; list of the equipment for which the PCB analysis has already been performed, the quantity of metal scrap that shall be removed from the substations during construction works, layouts of all the equipment that contain dielectric oil, existing batteries, etc. of Agarak-2 and Shinuhayr substations.

On 6th of December 2016 the joint environmental meeting was organized by PIU and PSMC with purpose to update the IEE and the preliminary EMP prepared by FICHTNER and discuss about the roles and responsibilities of the Environmental Specialists involved in the project.

PART III ENVIRONMENTAL MONITORING

No environmental monitoring program is developed and implemented during the reporting period. Also no on-site monitoring was needed since no construction activities were implemented during the reporting period.

The monitoring program will be developed with the construction contractor as a part of contractor's EMP prior to the start of construction activities. Monitoring plan will be approved by PIU and Supervision consultant.

The Program is subject to amendments and update upon the need during the implementation of the Project.

PART IV – ACTION PLAN FOR THE NEXT PERIOD

Based on the developed Contractor's Environmental Management Plan the selected general contractor must establish an action plan for every 6 months which will be approved by PIU and supervision consultant.