

Environmental Monitoring Report

#2 Semiannual Report (Covering the period of July – December 2018)
January 2019

AZE: Power Distribution Enhancement Investment Program, Tranche 1

Prepared by Project Management Consultant for Azerishig Open Joint Stock Company and the Asian Development Bank.

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Semi-annual Environmental Monitoring Report

Project Number: 42401-015
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Republic of Azerbaijan:

Power Distribution Enhancement Investment Program, Tranche 1

Financed by Asian Development Bank

Prepared by

Project Implementation Unit

Environmental Team

Prepared for

Asian Development Bank

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Abbreviations

Power Distribution Enhancement Investment Program
Semi - Annual Environmental Monitoring Review

ADB	Asian Development Bank
EMP	Environmental Management Plan
GFP	Grievance Focal Person
IEE	Initial Environmental Examination
IFC	International Finance Corporation
LLC	Limited Liability Company
MENR	Ministry of Ecology and Natural Resources
O&M	Operation and Maintenance
OJSC	Open Joint Stock Company
PCB	Polychlorinated Biphenyl
PIC	Project Implementation Consultant
PIU	Project Implementation Unit
RESSD	Regional Electricity Supply and Sales Department
SIW	Self-supporting Insulated Wire (aerial cable)
SPS	Safeguard Policy Statement
S/S	Substation

1 INTRODUCTION

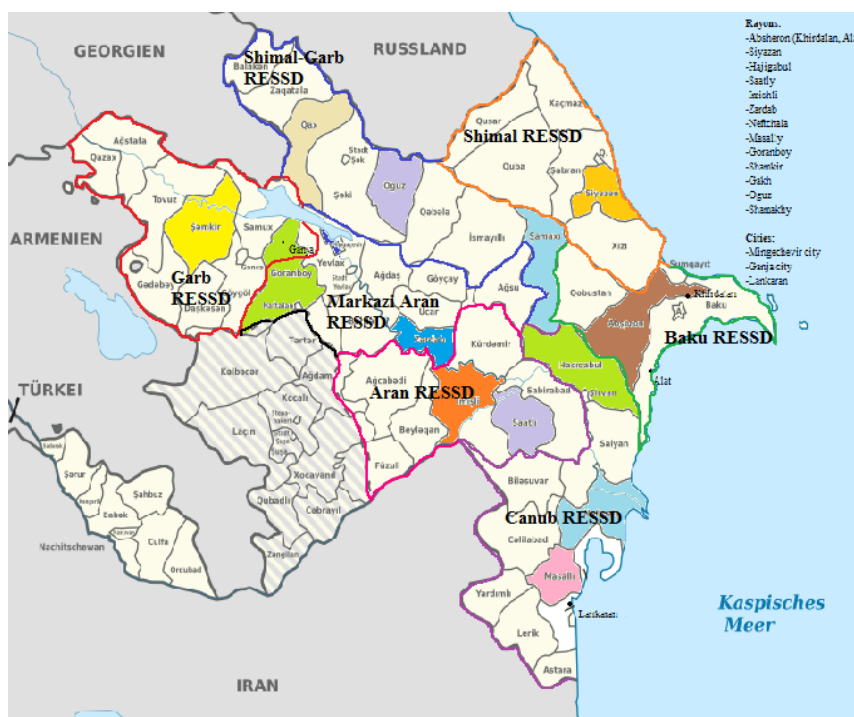
1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for Power Distribution Enhancement Investment Program, Tranche 1 - L3407.
2. This report is the 4th EMR and last for the project and presents the status of sub project implementation, details of compliance with environmental regulations of the Government and policies of ADB, details of compliance with environmental loan covenants, details of complaints received and their redressal and the status of compliance with various aspects of EMP as stated in the IEE reports.
3. Sub projects under Tranche 1 has been classified by ADB as environmental assessment category B (some negative impacts but less significant than category A) and the impacts of subprojects were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy (SPS 2009).
4. This Semi-Annual Environment Monitoring Report has been prepared by PMC (Dekon-Consulectra-ARPA Consulting) of the Project and covers the period from July to December 2018. This Semi-Annual Environment Monitoring Report will be the final report for the project, as there will be no activity after January 2019 due to receipt of completion certificates by all Contractors.
5. It describes the implementation of the environmental management plans (EMP) in respect of each subproject as laid down in the approved Initial Environmental Examination (IEE).

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

6. The Government of Azerbaijan (GoA) has requested the Asian Development Bank (ADB) to provide funding to support Azerishiq Open Joint Stock Company's (OJSC) Power Distribution Enhancement Investment Program (the Investment Program). The Investment Program aims to improve energy efficiency of the power distribution sector in Azerbaijan through rehabilitation and expansion of the aged distribution network. The investment program will (i) improve power supply reliability in the region; (ii) reduce distribution losses; (iii) improve customer service efficiency and quality; (iv) improve operational and financial performance of the regional electricity supply departments of Azerishiq, and (v) promote corporate reform and capacity development in the distribution subsector.



7. Tranche 1 of the investment program has three major outputs:
- Rehabilitation of 110 kV, 35 kV, 10 kV, and 6 kV Power Distribution Networks. Rehabilitation of 110 kV substations 4 units, 35 kV substations 16 units, 6-10 kV transformer stations 1,157 units; 110 kV distribution lines 54 km, 35 kV distribution lines 123 km, 6-10 kV distribution lines 1,237 km.

- Rehabilitation of 0.4 kV Customer Service Lines and Meters. Replacement of 0.4 kV customer service lines 3,900 km including installation of digital meters. The existing 0.4 kV overhead bare conductors will be completely replaced with new self-supporting aerial bundled cables, and the existing poles will be completely replaced with new steel poles. The new insulated cables will make illegal access to distribution lines and energy theft almost impossible.
- Support for Institutional Development, Capacity Building, and Project Management: including consultancy services for (i) project supervision and management including procurement, engineering support, financial management, social and environmental safeguard monitoring, external audits, and training. (ii) preparing and monitoring of all subsequent tranches under the proposed Multitranche Financing Facility (MFF); (iii) support for policy development and capacity building of Azerishiq staff.

8. There are 62 subprojects falling into eight types located in 13 districts of Azerbaijan.

The subprojects are:

- 110/35 kV substations – 4 subprojects
- 35 kV substations – 16 subprojects
- double circuit 110 kV distribution line - 4 subprojects (total length = 53.8 km)
- double circuit 35 kV distribution line – 16 subprojects (total length 122.45 km)
- 6 kV and 10 kV distribution lines in each of the seven Regional Electricity Supply and Sales Department (RESSD) areas – 7 subprojects (total length over 7 RESSDs = 1,236.5 km)
- 0.4 kV self-supporting insulated wire (SIW) distribution line in each of seven RESSD areas – 7 subprojects (total length over 7 RESSDs = 3,893.45 km)
- compact transformer substations (CTS) for each of the seven RESSD areas – 7 subprojects (total number of units = 1,157)
- supply and installation of electric meters in seven RESSD areas – one subproject (total number of units = 108,409)

2.2 Project Contracts and Management

9. Main organisations involved in the project and relating to Environmental Safeguard:
10. Project Implementation Consultant - Consortium Decon-Consulectra-Arpa
11. Project Implementation Unit under Azerishig OJSC in the person of its Environmental & Social Safeguard Specialist, Mr. Yusif Gayibov, Contract No. AZPDEIP-IC-ESS-2018 dated 01.06.2017 (extended on 01.04.2018)

The information on issuance of project completion certificates is listed below.

<i>Contract No</i>	<i>Contractor</i>	<i>Date of Completion certificate</i>
Aİ/ADB-1.1	Anadolu Elektrik Sanayi ve Ticaret	12.08.2017
Aİ/ADB-1.2	Retro Holding LLC	14.05.2017
Aİ/ADB-2.1	Gidromashservice OJSC	31.07.2017
Aİ/ADB-2.2	IMA Energy LLC	24.10.2017
Aİ/ADB-3.1	Anadolu Elektrik Sanayi ve Ticaret	15.02.2018
Aİ/ADB-3.2	Anadolu Elektrik Sanayi ve Ticaret	15.02.2018
Aİ/ADB-4.1	Azerelektrikshabaka OJSC	28.02.2018
Aİ/ADB-4.2	Anadolu Elektrik Sanayi ve Ticaret	20.03.2018
Aİ/ADB-5.1	AZNOF LLC və SMTS LLC,	25.05.2018
Aİ/ADB-5.2	Anadolu Elektrik Sanayi ve Ticaret A.Ş.,	15.02.2018
Aİ/ADB-6.1	Retro Holding LLC	30.07.2017
Aİ/ADB-6.2	Elektrikqurashdirma muessisesi	28.08.2017
Aİ/ADB-7	Retro Holding LLC	30.10.2017
Aİ/ADB-8.1	Azerelektrikshabaka OJSC	28.12.2017
Aİ/ADB-8.2	Elektrikqurashdirma muessisesi	25.08.2017
Aİ/ADB-9.1	Hayat Inshaat	25.04.2018
Aİ/ADB-9.2	Stone Construction LLC	05.07.2018
Aİ/ADB-10.1	VEST Ltd	01.01.2018
Aİ/ADB-10.2	VEST Ltd	11.01.2018
Aİ/ADB-11.1	Elektrikqurashdirma muessisesi	26.05.2017
Aİ/ADB-11.2	Universal Elektroservis LLC	16.10.2017
Aİ/ADB-12.1	VEST Ltd	01.04.2018
Aİ/ADB-12.2	VEST Ltd	01.04.2018
Aİ/ADB-13.1	Retro Holding LLC	15.04.2018
Aİ/ADB-13.2	VEST Ltd	31.01.2018
Aİ/ADB-14.1	IMA Energy LLC	20.12.2017
Aİ/ADB-14.2	IMA Energy LLC	25.12.2017
Aİ/ADB-15.1	Retro Holding LLC	01.03.2018
Aİ/ADB-15.2	VEST Ltd	01.03.2018
Aİ/ADB-15.1	Retro Holding LLC	01.03.2018
Aİ/ADB-15.2	VEST Ltd	01.03.2018
Aİ/ADB-16.1	RETRO Holding	20.02.2018
Aİ/ADB-16.2	RETRO Holding	20.02.2018
Aİ/ADB-17.1	RETRO Holding	10.01.2018
Aİ/ADB-17.2	RETRO Holding	19.01.2018
Aİ/ADB-18.1	RETRO Holding	20.02.2018
Aİ/ADB-18.2	RETRO Holding	13.01.2018
Aİ/ADB-19	Elektrikqurashdirma muessisesi	28.08.2017

12. The current reporting period was characterized only with dismantling works implemented in project sites within project regions, which were fully completed by October 2018.

Dismantling works were mainly consisted off:

- dismantling of old oil transformers
- dismantling of old Complete Transformer Stations (CTS)
- dismantling of old poles and lines

The dismantling works were implemented in the following project sites within project regions:

- Siyazan region (10 and 0.4 kV lines)
- Ganja city (35, 10, 0.4 kV lines, CTS, oil transformers)
- Shamkir region (35, 10, 0.4 kV lines, CTS)
- Zardab region (35, 0.4 kV and CTS)

Dismantling works were conducted with due care to environmental safeguard standards of ADB and instructions (transmitted through an official letter No. HX-2062 dated August 17, 2017) of Azerishig management to the Contractors. With regard to old transformers, necessary tests on PCB content of transformer oil were conducted by the specialized laboratory of Azerishig on sites before transportation of the transformers to storage facility of Azerishig. No PCB content above the norms were found during the tests.

2.3 Description of Any Changes to Project Design

13. There was no change in project design during current reporting period.

2.4 Description of Any Changes to Agreed Construction methods

14. There were no changes in project construction methods.

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

15. A series of inspections were carried out in July-December 2018 by the PIU's Environmental and Social Specialist, PIC Team Leader. As most of the project sites were completed by the time, the inspections were focused on reinstatement of the construction sites and their surroundings, dismantling works, transport of demolished equipment and materials to approved storage facilities. During the visits the Contractor's environmental managers (or HSE staff) were instructed to follow provisions of the EMP on restoration and cleaning of construction sites from all household and construction waste, dismantling of transformers and poles.

3.2 Site Audits

16. During the reporting period the following site inspections were carried out by the PIU's Environmental and Social Specialist (Yusif Gayibov) and PIC's team leader. As well as number of visits were conducted by ADB specialists within reporting period. Following table summarize the site audits:

Organization	Name	Title	Responsibilities	On project
Azerlshig OJSC EA	Yusif Gayibov	Safeguards Specialist	Responsible ensuring for the delivery of the project in line with Republic of Azerbaijan and ADB's environmental safeguards policy requirements	24 -26 July 2018 14 -16 August 2018 Site inspection with ADB in 4-6 September 2018 10 September 2018 3 December 2018
IPMC	Helmut Sandman	TL	Confirm that the works are being carried out within the requirements of legislation of the Republic of Azerbaijan, the IEE and its associated EMP	24 -26 July 2018 14 -16 August 2018 Site inspection with ADB in 4-6 September 2018 10 September 2018

ADB	Mission		Confirm that the works were carried in ADB's Environmental and Social Safeguard Policy requirements	28 September 2019
ADB	Mission		Confirm that the works were carried in ADB's Environmental and Social Safeguard Policy requirements	14 September 2019

Following table is the details of sub-stations visited by ES of Azerishig within reporting period.

Date	Site visited
24 July 2018	Dalimammadli, Yeni Ganja, Mahsati, Vagzalyani s/s and 10/0.4 kV distribution lines in the region
14-16 August 2018	Yeni Ganja, Mahsati, Vagzalyani and Shamkir s/s and 10/0.4 kV distribution lines in the region
4-6 September 2018	Dalimamadli, Yeni Ganja, Mahsati, Vagzalyani s/s and 10/0.4 kV distribution lines in the region
3 September 2018	Pirsaat 35 Kv Substation
3 December 2018	Alat Baglari s/s and 10/0.4 kV distribution lines in the region
3 December 2018	Mingachevir s/s and 10/0.4 kV distribution lines in the region

17. Findings of site audits and relevant mitigation measures are as following:
18. In general, no other major issues have been found on most of the sites, with the major ones being mainly related to removal of old transformers, poles, towers and construction debris from the project sites within and outside of facility boundaries and as well as overall reinstatement works. Necessary measures related to operation phase (fire fighting equipment and etc.) were all in place.

3.3 Issues Tracking (Based on Non-Conformance Notices)

19. No issues under tracking due to absence of non-conformance notices.

Table 3-1 Summary of Issues Tracking Activity for Current Period

Summary Table

Total Number of Issues for Project	0
Number of Open Issues	0
Number of Closed Issues	
Percentage Closed	100%
Issues Opened This Reporting Period	0
Issues Closed This Reporting Period	0

3.4 Trends

Quarterly Report No	Total No of Issues	% issues Closed	% issues closed late
1	4	100	0
2	2	100	0
3	0	0	0
4	0	0	0

20. During current reporting there is no single complaint recorded due to proper management of environmental issues, as well as completion of most of physical works.

3.5 Unanticipated Environmental Impacts or Risks

21. There were no unanticipated environmental impacts and risks which have been identified in the current period.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

Noise

22. IEE and EMP required noise monitoring during the construction period of the project. Within previous reporting periods instrumental noise monitoring was conducted and results were submitted in respective reports. But during current reporting period implemented works did not include any noise creating activities such as use of heavy machinery or demolition. Therefore, there was no requirement to conduct instrumental noise monitoring.

Water Quality

23. There was no evident of water pollution at nearby water bodies (small ditches, cannels) close to construction sites from the sites inspected.
24. New transformers all had in place oil spill containment bunding filled with gravel and connected to an underground tank to capture oil spills and contain fire. These were not fitted with oil-water separators.

Vegetation

25. No vegetation clearing was identified in the inspections. Trees and shrubs have been planted in the grounds of the new substations.

Dust

26. The observations and inspections do not revealed dust exposure during site visits. There were no reports of complaints due to dust.

Waste

27. Contractors have removed all waste stored in and around construction sites under strict supervision of PIC site engineers.

Hazardous Waste – Oil and PCB

28. 2 transformers have been dismantled by the Contractors during reporting in project sites. These old transformers are handed over to Azerishig JSC for testing, who in its turn conduct tests and analysis for PCB content of the transformer cooling oil.
29. There is a system in place which is required by the IEE EMP for managing this as follows:
- Oil from all transformers to be replaced will be tested to determine the chlorine content. If the chlorine content of oil exceeds 50 ppm the oil from that transformer will be properly tested for PCBs by Azerishig. If PCB is identified, MENR to be advised. MENR will arrange for the disposal of the PCB oils.
 - Retired transformers awaiting testing and disposal will be stored in a designated storage area in compliance with international requirements for storage of hazardous chemicals
 - Inventory of old transformers, PCB test results, storage location and storage conditions (Azerishig responsibility) (IFC EHS).
30. Information on the above has been pursued. PMC has written to Azerishig requesting to provide a list of all transformers removed as part of the project, whether PCB testing was carried out on oil in the transformers, the results of PCB testing including certificates, who did the testing, and how it was done; Accreditation certificates for the laboratory / laboratories and technicians undertaking the work; and advice on the precise location of removed transformers, and confirmation that they are stored in a manner that minimises risk to human health and environment due to ongoing oil leakage. Related communication was undertaken between PMC, Azerishig and Ministry of Ecology who was involved in the process of testing all transformers along the country before they were handed over to Azerishig from Azerenergy CJSC.
31. On January 25, 2018 the PMC's team leader and environmental specialist and PIU's environmental safeguard specialist visited Hazardous Waste Polygon (Yashma) under the Ministry of Ecology and Natural Resources where they were familiarized with PCB treatment process.
32. As reported by Azerishig to PMC, the tests conducted on oil in the transformers found that the PCB content was below the allowed limit. Old transformer have been removed from project sites and all have been transported to Azerishig storage areas

for utilization. As the PCB content were below allowed limits there were no need to transport them to hazardous waste polygon site.

4.2 Trends

33. It is understood that Contractors have not prepared SSEMPs. It is now too late to do so, for Tranche 1. However, this should be better implemented for Tranche 2. During preparation of feasibility study and tendering stage for Tranche 2 the issue will be discussed again and preparation of SSEMPs will be one of the pre-conditions to all contractors along with their other tender documents.

4.3 Summary of Monitoring Outcomes

34. The project activities do not cause impact to any water resources and surrounding environment.

4.4 Health and Safety

Community Health and Safety

35. No incident is recorded during reporting period related with community health and safety.
36. No incident is recorded during reporting period related with worker's health and safety.

4.5 Training

37. There were no training activities during reporting period.

Annex 1. Some photos on dismantling works

Zardab 35 kV substation



Masalli region



Ganja region



Shamkir region

