

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: **83703**

Project Name	Grant for Preparation of Electricity Transmission Network Improvement Project
Region	Europe and Central Asia
Country	Armenia
Sector	Energy and Mining
Lending Instrument	Technical Assistance
Project ID	P146199
Parent Project ID	N/A
Borrower(s)	Republic of Armenia
Implementing Agency	High Voltage Electric Networks CJSC
Environmental Screening Category	{ }A { X }B { }C { }FI
Date PID Prepared	December 20, 2013
Estimated Date of Appraisal Completion	January 11, 2014
Estimated Date of Board Approval	January 30, 2014
Decision	Project authorized to proceed to negotiations upon agreement on any pending conditions and/or assessments.

I. Country Context

1. Armenia has sustained economic reforms leading to significant improvements in its income levels over the past decade and a half. Real gross domestic product (GDP) growth averaged 12% per year during 2000–08 driven substantially by foreign exchange inflows, mostly in the form of remittances. These inflows boosted domestic investment, primarily in the construction sector. Growth in per capita incomes together with improved social safety nets contributed to a decline in poverty. However, the recent economic crisis reversed some of these achievements when Armenia experienced a sharp downturn with output contracting by 14% in 2009. Poverty increased, with 35.8% of the population living below the poverty line in 2010 compared to 27.6% in 2008. The Government’s strong counter-cyclical fiscal policy focused mainly on increased spending on infrastructure, social protection, and emergency financing for enterprises. While the fiscal expansion helped protect the poor and maintain jobs, the pace of recovery remained slow with only 2.1% growth in 2010, picking up to 4.6% in 2011 and 6.2% in 2012, but expected to moderate at approximately 4% in 2013.¹

II. Sectoral and Institutional Context

2. The energy sector of Armenia has achieved significant results through reforms and restructuring. The sector has strong payment discipline with collections for electricity at 100% of

¹ “Republic of Armenia: Fourth Reviews Under the Extended Fund Facility and Extended Credit Facility”, IMF Country Report No. 12/153.

sales. There are no explicit or implicit subsidies to the energy sector and the sector entities are among the largest tax payers in the country. There is a competent regulatory agency for the sector. Despite these achievements, the energy sector faces a number of challenges.

3. The key challenges in the energy sector include: (a) emerging power supply gap; (b) threatened energy security; and (c) increasingly unaffordable energy tariffs.

4. Emerging power supply gap: Armenia currently has sufficient capacity to meet its demand. However, depending on electricity demand growth scenarios, it is estimated that a generation capacity shortage to meet the peak electricity demand will emerge after the planned shut-down of the nuclear power plant (estimated in 2026), and the phasing out of inefficient and old (>40 years) thermal power plants.

5. Threatened energy security: Heavy reliance on imported fuels as well as old and under-maintained transmission and distribution assets put Armenia at risk of supply interruptions, price fluctuations, and possible outages. The average age of the transmission lines is around 45 years and the transmission company did not make any substantial investments in rehabilitation of the lines. Moreover, fuel for more than 90 percent of the country's energy needs is imported. Armenia is dependent on the imports of gas and nuclear fuel used to generate over two-thirds of the country's electricity.

6. Unaffordable energy tariffs: Rising fuel prices and the need for new, more expensive generating units make the energy tariffs less affordable for the poor. In 2010, poor Armenian households spent roughly 9% of their household budgets on electricity and gas. The affordability issue will be exacerbated if fuel prices continue to rise and the required significant investments are made.

7. The Energy Sector Strategy (2006) and Development Strategy for 2012-2025 recognize these challenges, including the need to increase the reliability of domestic power supply by upgrade and rehabilitation of key transmission assets, including 110/220 kV substations.

8. The Government is targeting to complete the rehabilitation of all 110/220 kV substations by 2018-2019. The Government is currently preparing an investment project with ADB to rehabilitate eight substations. Moreover, the Government has requested Additional Financing to the ongoing Bank financed Electricity Supply Reliability Project (ESRP) to rehabilitate some additional substations. Under the proposed Electricity Transmission Network Improvement Project (ETNIP) the Government requested the Bank to support with: (a) rehabilitation of remaining critical high-voltage substations not covered by the other donor-financed projects; (b) replacement of power transmission lines; and (c) rehabilitation of some other critical assets of the power network.

9. In particular, the substation of the Yerevan thermal power plant (TPP) requires urgent rehabilitation to allow for reliable evacuation of the power generated by the modern and efficient combined cycle gas turbine plant, which accounts for almost 23% of total annual electricity generation in the country. In case of the failure of the substation at Yerevan TPP, it will be impossible to supply the power generated at the plant to several thousands of residential and other customers.

10. The other critical investment need is the rehabilitation of Ashnak substation (Western part of the country). The Lori-2 and Toumanyanyan transmission lines are located in the Northern part of Armenia feeding several large industrial and residential customers. Those lines are dilapidated and require rehabilitation. The Government is also finalizing the list of other priority assets that it intends to rehabilitate under the project.

11. The project preparation grant will help to prepare ETNIP by financing the key project preparation activities detailed below.

III. Project Development Objectives

12. The development objectives of the proposed grant are to enhance the readiness of the High Voltage Electric Networks (HVEN) and Yerevan Thermal Power Plant (TPP) to implement ETNIP, and to strengthen the capacity of HVEN and Yerevan TPP.

IV. Project Description

13. **Component 1: Preparation of Investment Scope of the ETNIP and Technical Grid Studies.** This component will support the following key activities: (a) identification of investment needs for the proposed substations, power transmission lines, and, possibly, assets of the Electric Power System Operator; (b) preparation of technical specifications and bidding documents for the first year of the ETNIP implementation; (c) preparation of a detailed implementation schedule to ensure timely implementation of investments under the ETNIP; and (d) technical grid studies required from the perspective of ensuring long-term reliable power supply, including grid vulnerability assessment/safety improvement measures.

14. **Component 2: Preparation of Safeguards Documents and of OMs for Implementing Entities of ETNIP.** This component will help the implementing entities to prepare, discuss (through consultations) and disclose the relevant environmental and social documents to ensure that all project activities are screened to identify their likely social and environmental impacts and to document and mitigate these impacts, as needed. This component will also support preparation of OM for HVEN and Yerevan TPP covering the respective implementation aspects of the ETNIP for each implementing entity.

15. **Component 3: Training.** This component will provide training to HVEN and Yerevan TPP on technical, fiduciary and safeguards aspects of investment project preparation and implementation.

16. **Component 4: Financial audit.** This component will finance financial audit of the use of the funds under the grant at the end of the grant. The audit will be performed by a qualified auditing firm acceptable to the Bank.

V. Financing

Source:	(\$m.)
Borrower/Recipient	-
IBRD	-
IDA	-
ECA Capacity Development Trust Fund Grant	0.67
Total:	0.67

VI. Implementation

17. The grant will be implemented and monitored by HVEN. Specifically, the existing designated team will implement the grant activities under the project, including activities that will benefit Yerevan TPP (related to substation at Yerevan TPP) and Electric Power System Operator (technical grid studies). The designated project team at HVEN is comprised of a project coordinator, a procurement specialist and a financial management specialist, who will be responsible in day-to-day management of the grant activities. Safeguards support is currently provided by an implementation support consultant, but HVEN is expected to hire a full time staff member to oversee the safeguards aspects of the project. The grant implementation activities at HVEN will be supervised by its Management Board.

VII. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Piloting the Use of Borrower Systems to Address Environmental and Social Issues in Bank-Supported Projects (OP/BP 4.00)		X
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)		X
Pest Management (OP 4.09)		X
Physical Cultural Resources (OP/BP 4.11)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Indigenous Peoples (OP/BP 4.10)		X
Forests (OP/BP 4.36)		X
Safety of Dams (OP/BP 4.37)		X
Projects in Disputed Areas (OP/BP 7.60)*		X
Projects on International Waterways (OP/BP 7.50)		X

VIII. Contact point at World Bank and Borrower

World Bank

Contact: Mr. Artur Kochnakyan

Title: Energy Economist

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.

Tel: +37410-523992
Email: akochnakyan@worldbank.org

Borrower/Client/Recipient

Contact: Mr. Areg Galstyan
Title: Deputy Minister of Energy and Natural Resources
Tel: +37410-528704
Email: agalstyan@minenergy.am

Implementing Agencies

Contact: Mr. Sahak Abrahamyan
Title: General Director
Tel: +37410-720070
Email: hvenbec@gmail.com

IX. For more information contact:

The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Web: <http://www.worldbank.org/infoshop>