

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

Report No.: PIDA20433

Project Name	Electricity Transmission Network Improvement Project (P146199)
Region	EUROPE AND CENTRAL ASIA
Country	Armenia
Sector(s)	Transmission and Distribution of Electricity (100%)
Theme(s)	Infrastructure services for private sector development (80%), Other urban development (20%)
Lending Instrument	Investment Project Financing
Project ID	P146199
Borrower(s)	Ministry of Finance
Implementing Agency	High Voltage Electric Networks, Yerevan Thermal Power Plant
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	20-Jan-2015
Date PID Approved/Disclosed	02-Feb-2015
Estimated Date of Appraisal Completion	30-Jan-2015
Estimated Date of Board Approval	30-Mar-2015
Decision	

I. Project Context

Country Context

Economic growth slowed to 3.5 percent in 2013 and 2.7 percent year-on-year in the first half of 2014. The slowdown is the result of a number of factors such as slackening foreign direct investment (FDI), dependence on a limited number of commodity exports, and a difficult external economic environment. Consumer lending and remittances continued to support private consumption, but under-execution of government spending suppressed aggregate demand. On the supply side, the mining and energy sectors performed particularly badly, offsetting positive developments in manufacturing. The expectation of accession to the Eurasian Economic Union (EEU) has not yet had much impact on Armenia's trade profile. In fact, exports to the EEU declined. Among the developing Commonwealth of Independent States (CIS), trading partner slowdowns, geopolitical tensions, declining metal and mineral prices, and domestic capacity constraints have been slowing growth this year. The incidence of poverty is recovering slowly from the 2009 economic crisis, in line with growth dynamics. The composition of the consumption basket for both poor and non-poor groups of Armenians to some extent offset poverty pressures related to price increases. Employment is not a sufficient safeguard against poverty; the poverty rate among the employed grew from 22.2 in 2008 to 26.1 percent in 2012. Up to 2009, the shared prosperity, or growth in average consumption of the bottom 40 percent, experienced high annual

growth of 4.3 percent. Then there was a large contraction of 7.5 percent during the crisis and a subsequent recovery to growth of 3.4 percent between 2010 and 2012.

Sectoral and institutional Context

During the first phase of reforms in the 1990s and early 2000s the power sector achieved some remarkable results. The collection of electricity bills reached 100 percent of sales. A competent and independent regulatory agency for the sector was established. The regulatory framework has been adequate and overall conducive to private investments. The explicit and implicit subsidies were eliminated.

However, currently the power sector faces a number of major challenges that need to be addressed as part of the second phase of reforms. The key challenges are: (a) supply adequacy; (b) supply reliability; (c) affordability of energy tariffs; (d) financial viability of state-owned power companies; and (e) transparency.

Supply Adequacy: The power system will need around 500 MW of new gas-fired generation capacity as soon as possible to preclude the emergence of a supply capacity gap by 2020. To ensure sufficient long-term supply, the Government will also need to develop a number of renewable energy projects, which are estimated to be part of the least-cost supply plan.

Improvement of the tariff structure can also contribute to reducing the need for new generation capacity through promotion of more efficient energy consumption. Specifically, the existing electricity tariff structure does not reflect the large difference between the costs of supply during winter and summer months (AMD 28/kWh vs. AMD8/kWh), which creates perverse incentives for consumers and promotes economically inefficient electricity consumption.

Supply Reliability: The average interruption frequency per line for 110 and 220 kV overhead transmission lines (OTLs) on the balance sheet of High Voltage Electric Networks (HVEN) is 2.5 times higher than for comparator well-performing utilities. The average age of substations is around 35 years and 14 out of 16 substations have not undergone any major rehabilitation or upgrade. According to the findings of Armenia Power Sector Policy Note (2014), the substation of Yerevan Thermal Power Center (YTPC) and Ashnak substation have the highest rehabilitation priority.

Affordability: In 2013-2014, the average electricity tariff for residential customers increased by 40 percent and the natural gas tariff increased by 19 percent. After the increase, the share of energy expenses in the total expenses of an average household reached 10 percent, a level considered to be energy poverty. The poor (32 percent of the total population with income not sufficient to afford basic consumption of goods and services) suffered the most from the electricity and gas tariff increase, which increased the share of energy expenses in their disposable income to 13.6 percent taking into account the gas life-line tariff introduced by the Government in 2011. The energy tariff increase also led to fuel substitutions (e.g. replacing gas with wood or manure) and to energy deprivation among the poor households with resulting negative environmental and health implications. The issue of affordability will exacerbate as much needed investments in the sector are made.

Financial viability of state-owned power companies: The financial standing of state-owned power companies deteriorated since 2011 due to:

(a) The Government intervention in tariff filings of state-owned power companies. The Government intervened in setting revenue requirements and associated tariffs for some of the state-owned companies to limit the impact of increasing costs on end-user tariffs. Specifically, the Government, as the owner, agreed to eliminate or reduce some of the allowed expenses, such as O&M, depreciation and return on assets. Moreover, the O&M expenses of the sector companies in real terms reduced by 40 percent in 2009-2013 given that no adjustment for inflation was made when approving the tariffs. This has resulted in under-spending on maintenance and reduced investments in improvement of power supply reliability and efficiency.

(b) Large short-term borrowings by the state-owned companies for non-core business activities (financing of salaries of other distressed enterprises). These companies have accumulated AMD24 billion (US\$50 million) of payables (27 percent of their total revenue), of which AMD3.5 billion (US\$7.4 million) is expensive, short-term commercial debt (9-12 percent annual interest). The companies have increasing difficulty servicing this debt, which is not covered in their tariffs.

Transparency: The transparency of the sector has deteriorated since 2011. Specifically, it was manifested through reduced public disclosure of information related to energy sector issues and challenges.

The proposed project will help the Government to: (a) improve the transmission network reliability through rehabilitation of the Ashnak and YTPC substations; (b) improve the power system management through construction of a back-up dispatch center and improving building conditions of HVEN through, and (c) ensure adequate electricity supply through supporting preparation of a new electricity generation project.

The proposed project is consistent with the energy sector strategic objectives of the Government. Specifically, the Armenian Development Strategy for 2014-2025 (March 2014) prioritizes rehabilitation of critical transmission substations, improvement of the power system management, and provision of adequate electricity supply, which are important for promoting economic activity and growth, and reducing poverty. The National Energy Security Concept (October 2013) also prioritizes rehabilitation of key power transmission network assets as a prerequisite for reliable power supply in the country.

II. Proposed Development Objectives

The proposed project development objectives (PDO) are to improve the reliability of the power transmission network and system management, and support the Government efforts in ensuring adequate electricity supply

III. Project Description

Component Name

Component 1: Strengthening of the power transmission network

Comments (optional)

Component Name

Component 2: Improvement of the power system management

Comments (optional)

Component Name

Component 3: Preparation of a new CCGT project

Comments (optional)**IV. Financing (in USD Million)**

Total Project Cost:	69.16	Total Bank Financing:	52.00
Financing Gap:	0.00		
For Loans/Credits/Others			Amount
Borrower			17.16
International Bank for Reconstruction and Development			52.00
Total			69.16

V. Implementation

The project will have two implementing entities – HVEN and YTPC. Having two implementing entities under the project is justified given: (a) different ownership of assets and (b) the need to ensure commitment during implementation.

HVEN, the state-owned power transmission company established in 1998, is responsible for operation, construction and maintenance of the high voltage power transmission network in the country. The implementation of the respective project sub-components at HVEN will be overseen by the Project Management Board. The implementation of the respective project sub-components at YTPC will be overseen by the Project Management Board, consisting of representatives of the HVEN, the Government and power sector companies. The YTPC operations are overseen by the company's Board, which is the same as the Board of HVEN.

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04		x
Forests OP/BP 4.36		x
Pest Management OP 4.09		x
Physical Cultural Resources OP/BP 4.11		x
Indigenous Peoples OP/BP 4.10		x
Involuntary Resettlement OP/BP 4.12		x
Safety of Dams OP/BP 4.37		x
Projects on International Waterways OP/BP 7.50		x
Projects in Disputed Areas OP/BP 7.60		x

Comments (optional)

VII. Contact point

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