

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

Report No.: 40756

Project Name	Small Hydro Rehabilitation Project
Region	Europe and Central Asia
Sector	Energy and Mining (100%)
Project ID	P101625
Borrower(s)	The Energy Efficiency Centre Georgia
Implementing Agency	The Energy Efficiency Centre Georgia
Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	July 20, 2007
Date of Appraisal Authorization	August 9, 2007
Date of Board Approval	September 17, 2007

1. Country and Sector Background

Georgia is small country with population of 4.3 million, it is located to the south of the Caucasus mountain range neighboring with Russia, Azerbaijan, and Turkey. Following independence in 1991, the collapse of the centrally planned economy, and the civil war which displaced almost 7 percent of Country's population resulted in deterioration of the economic activity. Despite slight rebound in 2000, in 2003 the economy remained stagnated, governance weak, corruption widespread, and infrastructure services poor. In November 2003 the Rose Revolution peaceful replaced the Government and brought new President to the power.

The new Government committed itself to addressing corruption and governance issues and ensuring provision of basic infrastructure services to the population. It has declared infrastructure is a key priority to generate jobs and spur economic growth. Among other infrastructures, investment in non-oil energy sector has been prioritized, as poor electricity supply was considered as one of major impediment to the economic growth.

To address poor electricity supply and prioritize investments within the energy sector the Government formulated energy sector strategy named "Main Directions of the State Energy Policy." The Policy set *self-sustainability* and *energy security* as two main priorities of the energy sector development.

Since the Rose Revolution substantial achievements have been made in the Energy Sector; power supply has improved, existing power stations have been rehabilitated, new thermal station have been constructed. The revenue collection for delivered electricity has reached almost 100 percent which allowed power sector to become financially self-sustainable. Improvement of the financial condition of the sector helped to address internal and external debt of the sector. The resolution of outstanding external debt has opened up import export potentials with neighboring countries.

Georgian Energy Sector is largely import dependent. Georgia satisfies its demand mostly by imported primary energy sources. It consumes about 8 billion kWh of electricity per year, of which about 30 percent is domestic thermal power produced from imported gas, and nearly 10 percent is electricity import.

Georgia is rich with hydropower resources with the potential to fully satisfy countries power needs. However, due to lack of maintenance and under-investment in these resources remain unutilized. A substantial number of small power stations are either not operational or operate below installed capacity.

2. Objectives of the Project

The objective of the project is to reduce Georgia's dependency on fossil fuel generated electricity by increasing power generated from the hydropower stations. The project will rehabilitate small run-of-river hydro plants (SHP) with a total additional capacity of 13,2 MW.

3. Rationale for Bank Involvement

The Small Hydro Rehabilitation Project is fully in line with the Millennium Development Goals (MDGs), and Bank's Country Partnership Strategy (CPS) which was adopted in 2005. Also it directly contributes to the Governments strategy of *energy security by* addressing growing electricity needs and reducing import dependency of the country.

The proposed project supports the achievement of the Millennium Development Goals (MDGs) by contributing to environmental sustainability. Climate change threatens to significantly undermine efforts to realize MDGs. It will pose a serious threat to development and poverty reduction, and the effects will be felt most strongly by people living in rural areas in the least developed countries, who rely on the natural environment for their livelihoods. The Bank's participation in the Small Hydro Rehabilitation Project is consistent with the effort to cope with the impacts of global climate change and to create more sustainable, less greenhouse gas intensive energy generation.

The CPS identifies unreliable energy supply as the key obstacle to private sector growth. Rehabilitation of the power stations will increase their capacity and provide additional electricity to the national electricity grid improving supply reliability. In addition, rural location of the hydropower station will ease hardship of the rural population in the cases when there are supply shortages at national level.

4. Description

The Bank as trustee of the Community Development Carbon Fund (CDCF), one of the carbon funds managed by the World Bank, purchases emission reductions (ERs) from rehabilitated hydro power stations. The reduction is expected from substitution of the fossil-fuel based thermal generation by hydro power. Generation increase is expected as a result of rehabilitation of the existing small-scale hydro power plants.

The project entity, Energy Efficiency Center Georgia (EEC), which is a Georgia-based non profit organization, has developed and agreed an outline of the Community Benefit Plan

(CBP), which is required by the CDCF, with the World Bank. The CBP will be implemented in Kakhareti village, which is one of the project sites and consist of the three main projects: rehabilitation of three small bridges, construction of water supply system, and construction of the community center.

The EEC will implement the CBP by using the Community Benefit premium, which is one dollar per ER and paid if the CBP is implanted as agreed with the Bank. The EEC will be monitoring implementation of the community development.

The total rehabilitation cost of the SHPs is US\$ 5.6 million which consist of grant funding from USAID and UNDP¹, SHP owners' equity and contribution of the local communities and debt financing. USAID under its Rural Energy Program (REP) provides US\$ 0.8 million, UNDP US\$ 0.6 million. Total owner equity equals US\$1.8 million. The remainder is provided as a loan by Bank of Georgia which is back financed by EBRD.

5. Financing

Source:	(\$m.)
Borrower	0
IBRD (PCF)	1.1
Total	1.1

6. Implementation

The first stage of the project consists of nine small hydro projects (SHPs). They are part of the 24 SHPs which are implemented under the REP. At a later stages the project may include more then nine SHPs covered by the REP project. The Energy Efficiency Center Georgia (EEC) is a bundling agency for this project; GHG emission reductions from SHPs are bundled by EEC and sold to the Bank. The EEC will also pass-through the carbon revenue to the SHP owners retaining a fee for administration of project. As a CDCF project, the EEC has full responsibilities for implementing and monitoring the Community Benefit Plan.

7. Sustainability

The project is implemented in relatively rural and economically disadvantaged regions of the country. The investments that the projects bring will have a positive impact on the local economy by employment generation during construction. Employment generation is also expected as a result of the operation of the SHPs due to improved power supply.

The project will contribute to meeting the Kyoto Protocol goals by helping to reduce GHG emissions from thermal generation. The power generated from the rehabilitated SHPs will substitute thermal power plants on the margin of the electricity system in Georgia.

8. Lessons Learned from Past Operations in the Country/Sector

¹ The source of funding for the UNDP is Norwegian Government grant.

The Banks has been engaged in the preparation of the Methane Leak Reduction Project with the Government owned oil and gas company Georgina Oil and Gas Corporation GOGC. However, the project was not completed as the parties did not conclude the Emission Reductions Purchase Agreement (ERPA).

Relatively long time spent on the preparation and signature of ERPA has been identified as the major weakness of Bank carbon transaction. Reduction of the time spent between project start and signature of the ERPA is important for the successful conclusion of ERPA.

9. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No	TBD
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]	[]	
Piloting the Use of Borrower Systems to Address Environmental and Social Issues in Bank-Supported Projects (OP/BP 4.00)	[]	[x]	

10. List of Factual Technical Documents

1. List and parameters of the first year SHPs
2. Map of Georgia with SHPs

11. Contact point

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

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