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**Hydropower Investment
Promotion Project (HIPP)**

HIPP MONITORING AND EVALUATION REPORT

Second Year Assessment, March 2012

DRAFT

March 2012

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HIPP MONITORING AND EVALUATION REPORT

Second Year Assessment

USAID HYDROPOWER INVESTMENT PROMOTION PROJECT
(HIPP)

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DELOITTE CONSULTING LLP

IN COLLABORATION WITH BLACK & VEATCH AND PIERCE
ATWOOD LLP.

USAID/CAUCASUS OFFICE OF ENERGY AND ENVIRONMENT

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

List of Acronyms

| Acronym | Term |
|----------------|--|
| CBETA | Cross Border Energy Trading Agreement |
| DCA | Development Credit Authority |
| EBRD | European Bank for Reconstruction and Development |
| ESCO | Electricity System Commercial Operator Ltd. |
| ETA | Energy Trading Platform |
| GEDF | Georgian Energy Development Fund |
| GSE | Georgian State Electrosystem |
| GoG | Government of Georgia |
| GoT | Government of Turkey |
| HIPP | Hydropower Investment Promotion Project |
| HP | Hydropower |
| HPP | Hydropower Plant / Hydropower Project |
| ICG | Investment Coordination Group |
| IFI | International Financial Institutions |
| IM | Information Memorandum |
| IPD | Investment Projects Department |
| IR | Intermediate Result |
| KfW | KreditanstaltfürWiederaufbau (German government-owned development bank) |
| MENR | Ministry of Energy and Natural Resources |
| M&E | Monitoring & Evaluation |
| MENR | Ministry of Energy |
| MoU | Memorandum of Understanding |
| MW | Megawatts |
| PPA | Power Purchase Agreement |
| PPP | Public Private Partnership |
| TEIAS | TürkiyeElektrikİletim A.Ş., the Turkish Transmission System Owner and Operator |
| TNA | Training Needs Assessment |
| TWh | Terawatt Hours |
| USAID | US Agency for International Development |
| USG | US Government |
| USTDA | US. Trade and Development Agency |

Deloitte Consulting LLP, in collaboration with Black & Veatch and Pierce Atwood LLP, presents its second year Monitoring and & Evaluation (M&E)report under the United States Agencyfor International Development (USAID)'s Hydropower Investment Promotion Project (HIPP).

PROJECT BACKGROUND AND PROGRESS

Background

In March 2010 Deloitte Consulting was awarded a three-year contract under USAID/Caucasus-Georgia's Hydropower Investment Promotion Project – to provide assistance to Georgia's Energy Sector to promote and initiate private sector development of 400 MW or more in new, run-of-river hydropower stations.

The overarching goal of this initiative is to identify, leverage, and incentivize investment opportunity resulting in private sector commitment to construct run-of-river hydropower plants – leading to increased generating capacity, locally produced energy, enhanced energy security, and the elimination of winter imports, greatly reducing the use of natural gas and other fuel sources for electricity production.

HIPP's activities will not directly increase generating capacity because it will work at the pre-feasibility and promotion stage in order to stimulate private sector investment in hydropower.

To stimulate and secure investment into Georgia's small-and medium-sized hydropower market, Deloitte/HIPP is working with local and international partners in all areas to promote awareness of and investment in Georgia's abundant and largely untapped hydropower resources. Key areas of activity include:

- Developing Quality Engineering and Technical Information;
- Providing Targeted and Effective Investor Outreach and Promotion;
- Supporting Institutional Strengthening and Capacity Building; and
- Partnering Programs and Opportunities to Stimulate Investment.

Project Objectives

The project's stated goals are to:

- Increase the amount of accurate, current, and robust information on HPPs that is available to potential investors;
- Produce detailed studies to facilitate investment in deals for HPPs developed in conjunction with the Government of Georgia, donors, and/or international financial institutions;
- Deepen the promotional, technical, and legal capacity of the Government to reach, engage, and support private hydropower investors;
- Develop investment-grade marketing collateral and implement an effective and comprehensive investor and industry outreach plan; and
- Help resolve implementation hurdles for investors and market makers through risk sharing, innovative financing, and upfront analytical work.

Progress

Dealing with ambiguity effectively has become a leading and critical success factor for the project. Fundamentals essential to a successful energy market – adoption of network tariff methodologies, allocation of transmission capacity, congestion management of international interconnections, harmonization of cross-border energy trading systems, modifications of legislation and regulations – are far less advanced than in developed markets, and/or not aligned with traditional western models to support a competitive energy sector.

HIPP has been instrumental in driving progress across the broad and ever-changing energy sector landscape in Georgia. Identifying impediments to private sector investment and ensuring resolution of these many open issues is high on the agendas of counterparts, partners, and our client alike.

The HIPP team is addressing both mandated deliverables and related sector issues, in a comprehensive strategy to ensure the best possible outcomes for USAID and for the people of Georgia

USAID M&E framework

Implementation of HIPP in Georgia fits under USAID's Enhanced Energy Security Assistance objective under Intermediate Result (IR) 1 – Facilitated Hydropower Investment. This IR has two Sub-IRs: 1.1 – Investment opportunities in Georgia promoted; and 1.2 – Improved availability of quality data and analytical tools. Cross cutting elements of IR5 – Strengthened Energy Management Capacity, also contribute to this IR.

SUMMARY OF 2ND YEAR ACTIVITIES AND RESULTS

The following section provides short summaries of USAID/HIPP's second year activities, results to date and continuing issues to be addressed in the next period.

The second year was full of significant events for HIPP. Meaningful progress was made towards fulfilling the project's main goal of facilitating the signing of 400 MW of signed Memorandum of Understandings (MoUs) between the Government of Georgia (GoG) and investors.

- HIPP has analyzed over 150 potential HPP sites across Georgia. These run-of-river sites range from 5 MW to 120 MW in potential generating capacity. HIPP has developed detailed analysis of the Stori and Aragvir rivers in the northeast, Tsablari River and Khanistskali River in the center of the country, the Machakela River in the south-west, and the Tskhenistskali and Enguri rivers in the north-west. HIPP engineers have concluded that each of these river basins offer excellent project opportunities for renewable energy investors.
- HIPP created 12 Information Memorandums (IM). 2 were for the Tsageri HPP and Lentekhi HPPs; 4 for Stori River plants; 2 for Machakhela River plants, 2 for Kheledula River plants and 2 for Tsablari. The IMs were used during MENR road shows to Europe and the EU to promote Georgian HPPs.
- A pre-feasibility study developed for the Tskhelintskali River in the Tsageri region by HIPP aroused great interest from international investors, including from privately owned Turkish construction company Kolin Construction. Kolin signed an MoU with the GoG committing it to invest in the development of a hydropower plant on the site. Kolin intends to construct a 122 MW run-of-river plant at an estimated development cost of between \$200 to \$300 million.
- The MENR assigned the 120 MW Lentekhi HPP and the 58 MW Machakhela HPP Cascade to the Georgia Energy Development Fund (GEDF). The GEDF has worked quickly to develop the projects focusing on land acquisition and permitting. Several potential equity investors have expressed strong interest in joining the GEDF in developing these projects. The GEDF and its equity partners are expected to start feasibility studies in the first half of 2012.
- A copper mine developer has expressed strong interest in investing into the 48 MW Stori HPP Cascade. The developer has obtained a long term lease for a copper (and gold) mine in the Kakheti region and plans to build a large processing plant for copper and gold near Telavi. The Stori Cascade would provide a long-term low cost energy source for the processing plant.
- HIPP held 4 public awareness workshops: in Tsageri on the Lentekhi and Tsageri HPP Projects, in Alvani on Stori HPP Project, in Bagdati on the Tsablari HPP Projects and in Adjara on the Machakhela HPP Projects. The number of workshop participants exceeded 150 people from local municipalities, regional governor offices and the general public. HIPP developed brochures were given to more than 200 members of the public, many of them women. These workshops have proved that the public is aware of the key environmental and social issues related to new HPPs, that opening discussions to interested stakeholders brings new insights

previously unknown, and that the local municipalities are not only interested in the projects, but also want to take part in their planning and implementation.

- HIPP conducted capacity building workshops for local media aimed at strengthening and promoting cooperation between the energy sector and media representatives; increasing awareness and understanding of the media to cover issues related to the energy sector and the activities of the Ministry and USAID to stimulate and secure international investments into Georgia's small and medium-sized hydroelectric power market, investment projects implemented and planned in the hydropower sector.
- Based on the Training Needs Assessment prepared by HIPP, capacity building activities were conducted for MENR staff. HIPP experts conducted two training workshops: Training in Financial Modeling to introduce basic concepts and improve practical skills in financial modeling; and Training in Risk Mitigation Mechanisms for Financing Georgian HPPs.
- Sponsored the Ministry of Energy and Natural Resources and the Georgian Energy Development Fund (GEDF) at the Financial Times Energy Leaders' Summit and a road show for the Ministry in London.
- Completed the Hydropower Investor Portal for the Ministry of Energy and Natural Resources' (MENR), www.hydropower.ge, and placed it online for potential investors of Georgian HPPs.
- Completed the USAID Energy Map with updates on electricity, gas and oil sectors. The Energy Map was used for a media presentation by the Georgian President, Mikheil Saakashvili at various HPP construction sites. .
- HIPP provided several documents to USAID and the MENR on the critical issues that need to be resolved by the GoG to improve the environment for financing of new Georgian HPPs. One of the reports was on modifications that are required to power market rules to allow for energy trading to Turkey across the new high-voltage connection.
- HIPP proposed major revisions to the GSE transmission template agreement and ESCO power purchase template agreement. Except for some minor issues, both GSE and ESCO approved these proposed changes. This was a major step in developing a proper legal framework for new Georgian HPPs.
- In response to a request from MENR, the HIPP Team produced 15 HPP site identification studies worth over 400 MW in aggregate for the Upper Enguri River Basin. The sites were divided into 3 clusters with each cluster greater than 100 MW. The MENR started promoting the sites during Year Two of the project. Potential investors have already expressed interest in the clusters. HIPP has begun to prepare Project Assessment Studies for each of the 15 HPP sites.
- The HIPP Team supported negotiations between the governments of Georgia and Turkey for a Cross Border Energy Trading Agreement (CBETA). As a result, the CBETA was signed by the Governments of Turkey and Georgia on January 20, 2012. Key issues have been resolved including the creation of a separate committee on compensation to Turkey for energy previously provided to Georgia. HIPP will also provide extensive comments on the Interconnection Operations Agreement (IOA) ensuring that the CBETA and IOA are consistent.
- A milestone was reached during the year when the number of investors informed of Georgia HPP investment opportunities exceeded 500. The HIPP team has reached out to investors across the globe and investors continue to contact HIPP with interest in new run-of-river projects.

1. POTENTIAL HPP PROJECTS

Water is a primary natural resource in Georgia. The country's water resources – rivers, lakes, water reservoirs, ice, underground water, bogs – rank among the most abundant in the world.



Above: A Tributary of the Enguri River

By absolute indices of potential hydro resources, Georgia is fourth among CIS countries after Russia, Tajikistan, and Kazakhstan. By concentration of potential hydro resources, Georgia is one of the top territories in the world. With 60,000 km of rivers and a combined annual fresh water supply of 96.5 km³, the country ranks particularly highly in hydropower resources per-capita.

Georgia's hydropower potential is largely undeveloped. Currently only 25% of total generation potential is realized. Hydroelectric generation will continue to play a major role in the country's energy policy and planning for the foreseeable future.

The country has many rivers that can provide environmentally friendly run-of-river hydropower projects with high plant factors, making them attractive to investors.

The Government of Georgia (GoG) has performed analysis of many sites over a period of decades. Some sites were recently identified and assessed by the MENR with the assistance of USAID (through Winrock's Rural Energy Project), Gross Energy, and others. These 91 HPP sites with preliminary assessments had been placed on the MENR's website when HIPP started, and formed the list of small and medium projects officially eligible for Georgia's renewable energy incentives. During the first two years of the HIPP, many additional sites have been identified and studied, and many of the 91 initial sites have been removed from the official list for various reasons (security, for example). There continue to be many small and medium project sites available for development, and many of those sites appear to be very good from cost and power production standpoints.

Activities completed and accomplishments

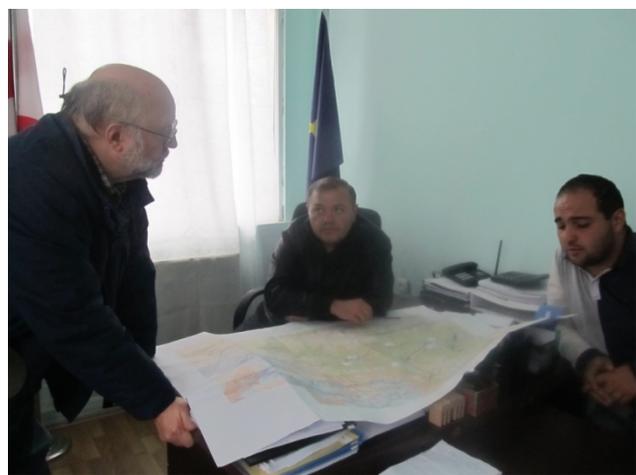
| Summary of HIPP Related Activities | Accomplishments |
|--|---|
| <ul style="list-style-type: none"> ▪ Numerous field trips to up to 30 HPP sites. ▪ Analyzed hydrology based on daily and/or monthly flows for the full period of record for 28 identified HPP projects ▪ Studied geological information and developed site-specific geological maps and reports for 28 identified HPP projects ▪ Analyzed environmental and social impacts for 28 HPPs, based on field inspections and interviews ▪ Engaged the public - both local officials and individual residents - from the early stages of project identification and planning ▪ Ensured liaison with different groups of stakeholders (Ministries, NGOs, Academia, etc.) ▪ Collected and analyzed information on glaciers in the Svaneti region | <ul style="list-style-type: none"> ▪ Updated database of 143 HPPs, with more to be added ▪ Produced pre-feasibility studies for 12 potential HPP sites within the Stori, Machakhela, Tsablari, Kheledula and Tskhenistkali rivers' watershed areas ▪ Carried out identification studies for 15 potential HPP sites within the Enguri River watershed area ▪ Produced project assessment studies for the Khumpreri and Dolra HPPs ▪ Technical Working Group, formed from HIPP staff and representatives of Ministry of Energy and Natural resources, is active and meets on an as-needed basis ▪ Project Awareness Workshops (PAWs) in areas impacted by 12 projects in four clusters; each cluster workshop was conducted by HIPP's Georgian Communication Specialist, Hydropower Engineer, Environmental Specialist, and Translator, and with the participation of other team members ▪ Participated in EIA public discussion meetings for larger HPPs (e.g. Namakhvani, Khudoni, and Nenskra HPPs) to track the hydro-related issues that concern the public, the NGO community, and the regulators ▪ Engaged in different forums and conferences related to the energy and environment issues (e.g. Civil Society Organizations National Platform, on Georgian Environmental Issues and Energy Policy in Euro-integration Context, etc) ▪ Produced a report on glacier fluctuation in Svaneti |

2. USAID FORWARD THROUGH HIPP

USAID is promoting far-reaching, long-term changes in institutional and human capacity to support sustainable development in Georgia. In this light, HIPP's endeavors to build the capabilities of Georgian hydropower engineers is worthy of note. Over the first eighteen months of HIPP, highly qualified hydropower and transmission engineers from HIPP subcontractor, US firm Black and Veatch, developed 12 HPP project prefeasibility studies, transferring their experience and know-how to Georgian hydropower engineers as they did so.

In February 2012, B&V's engineers were able to hand over responsibility for the remaining prefeasibility studies to be completed by the project to the Georgian team they had trained.

Below: Pictures of HIPP Team Field visits, B&V Professional Engineer with Georgian Specialists studying Upper Enguri River Watershed Area, engaging local community members.



Below: Site evaluation in the Aragvi Watershed Area, near Gudauri

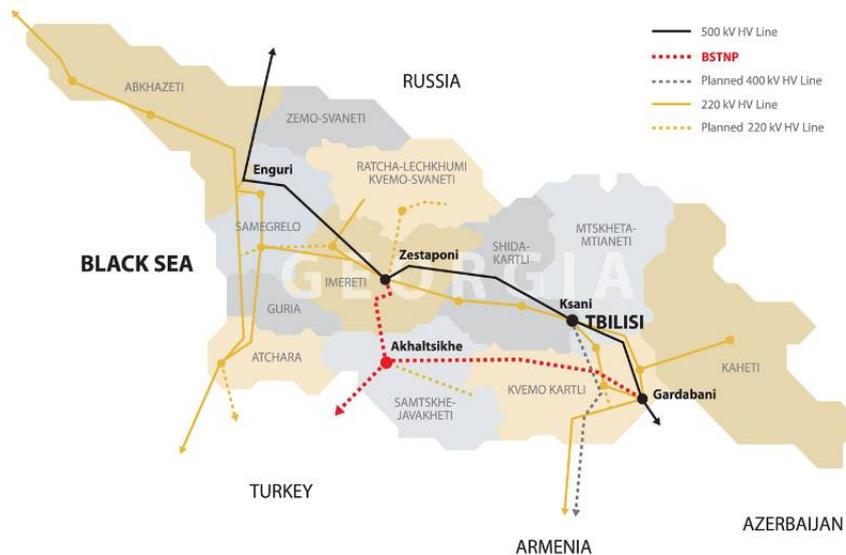


3. TRANSMISSION EXPANSION IN GEORGIA AND EASTERN TURKEY

1. Introduction

The most promising market for Georgian hydroelectric energy, over and above that needed in Georgia, is probably in the fast-growing economy of Turkey.

Investors in HPPs are interested in the development of new transmission facilities within Georgia and Turkey to ensure a reliable power system in Georgia and enough export capacity on the power lines from Georgia to eastern Turkey.. This transfer capability must be known not just later in 2012 when the 400 kV interconnection that is now under construction is energized, but also for the future during the operating lives of their HPPs.



Map of the transmission lines currently under construction in Georgia

The Georgian system will be uniquely positioned to export electricity to Turkey when several projects that are currently fully funded and under construction are operational. These include conversion from the Georgian 500 kV transmission standard to the Turkish 400 kV standard through an HVDC back-to-back converter at a new substation near the border. Export capacity will initially be limited to 650 MW, in accordance with an agreement with Turkey. A bi-lateral study of the future capacity needs and constraints is currently underway. It is managed by TEIAS, and Georgia is actively participating through GSE.



The Zekari 500 kV transmission line, near Akhaltsikhe Substation



Above:
Akhaltsikhe substation late December 2011,

2. Activities completed and accomplishments

| Summary of HIPP Related Activities | Accomplishments |
|---|---|
| <ul style="list-style-type: none"> ▪ Several field trips to the Georgian power transmission and substation facilities under construction to verify progress ▪ Meetings with Georgian (GSE, Energo-trans) and Turkish (TEIAS) network owners, study contractors(Tubitak) and operators ▪ Discussions regarding capacity of the Turkish transmission system from Borçka to the west and southwest of Turkey and plans for improvements ▪ Monitoring and analysis of transmission line and substation construction and upgrades in Georgia | <ul style="list-style-type: none"> ▪ Updated information on progress of transmission line rehabilitation and/or construction in Gardabani-Marneuli-Akhaltsikhe-Zestaponi 500 kV line and 400 kV line to the Turkish-Georgian border ▪ Updated report on Akhaltsikhe substation construction and Zestaponi and Gardabani substation expansions. ▪ Updated BSNP brochure ▪ Tracked progress on planning and construction of transmission line and substation improvements to the 110 kV and 220 kV Georgian system, the Energo-Pro 220 kV connection to Turkey, 500 kV and 330 kV connections to Azerbaijan, and 400 kV and 220 kV connections to Armenia |

3. Issues

The physical capacity of the transmission system in Georgia should be adequate for hydropower export, but the procedures to set priorities and allocate transmission access are not complete and the wheeling rates to be charged have not been determined.

The Georgian transmission system also requires extensive protection, control, and communication improvements to safely and efficiently operate while connected to the Turkish system. Many improvements are planned and/or funded through various GSE and donor-funded programs, but additional work is needed.

The physical capacity and allocation of capacity in the Turkish system are not clear to date. Ongoing studies and changes in the electric power system organization may eliminate some of this uncertainty. The close cooperation now occurring between the GoG and Turkey is a positive step toward resolving issues, but much remains to be done.

4. INCREASE OF PUBLIC PARTICIPATION

Introduction

HIPP began conducting Public Awareness Workshops (PAWS) on project sites during Year Two. PAWs are intended to ensure public participation during the early planning stages of HPP project development, and to increase awareness amongst local communities on small and medium run-of-river hydro power plants.

Local landowners, vendors, traders and local authorities were identified by the HIPP team and informal meetings were conducted beforehand during field trips. During those preliminary meetings stakeholders were informed about the planned PAWs and were invited to attend. Additionally, the HIPP team strived to facilitate attendance of all municipality members at the workshop. Through these PAWs, HIPP actively engaged 200 community members in the HPP project development process.

During each workshop, HIPP team members provided general information about HPPs and also discussed technical characteristics of each proposed HPP project, including focusing on possible environmental and social impact. It was also made clear during these meetings that none of the proposed projects would create any significant impoundment of water or cause displacement of the local population. Participants were asked to express their opinions/attitudes towards the project in general as well as any potential impact on the environmental and socio-economic conditions of their own households.

Activities Completed and Accomplishments

| Activities Completed | Accomplishments |
|--|---|
| Four public awareness workshops were conducted in the following communities: <ol style="list-style-type: none">1. Tsageri, (Racha-Lechkhumi region) on two HPP Projects (Tsageri and Lentekhi Projects) on the River Tskhenistskali2. Akhmeta, Telavi region (Kakheti) on four HPP Projects on the River Stori.3. Adjarisaghamarti, Khelvachauri region, Adjara Autonomous Republic on two HPP projects on the River Machakhela; | <ul style="list-style-type: none">• Identified community concerns regarding the development of potential projects and gained their feedback;• Increased local community awareness of social and environmental impact of run of river hydro, and increased local community support for r-o-r hydro.• Made changes in preliminary project designs according to community concerns (Tablari HPP) |

4. Tsablariskhevi, Tskaltashua and Daphenili communities in Baghdati Municipal District, Imereti region on two HPP projects on River Tsablaritskali.

Issues

- In general, each community's attitude towards proposed project development was positive. Community members think they could benefit from the development of HPPs in their locale, as long as project developers properly consider their concerns/suggestions and each watershed's specific characteristics.
- Based on the findings and conclusions described above, it would be constructive to maintain a holistic and participatory approach to project development by regularly connecting with communities potentially effected by HPPs to review possible environmental and social implications of project development.

Below: Photos of Public Awareness Workshops conducted by HIPP:



PAW in Tsageri - Lentekhi Community



PAW in Stori Community



PAW in Machakhela Community



PAW in Tsablari Community

5. ENABLING ENVIRONMENT IN GEORGIA

1. Introduction

In Year Two, HIPP created a new group called the Enabling Environment Team (EET) to focus solely on the creation of an Electricity Trading Mechanism (ETM). The ETM is defined as the minimum requirements for establishing electricity trading between Georgia and Turkey on a competitive basis. The ETM will require that some legislative, regulatory, organizational and technical improvements are made to the Georgia power sector, and that it is harmonized with regional power market regulations.

The EET has worked to create the initial documents that will lay the foundation for development of the ETM. This initial work includes:

- Drafting the Vision of the Georgian Electricity Market Model for 2015 (“GEMM 2015”). The Vision includes the overall electricity market and how the ETM will fit within the GEMM.
- Developing charts indicating electrical flows and flow of funds among GEMM participants for the year of 2015; additionally, preliminary electricity sale and purchase agreements and numerous service contracts required among market participants were described.
- Creating a roadmap for GEMM 2015, with scheduled activities and key deadlines from 2012 through 2015. The road map provides a high level overview of the tasks that need to be completed for GEMM 2015 to be realized.
- Reviewing and assessing the Turkish electricity market grid code and balancing and settlements regulations and determining the relevance of the various articles for Georgia.

The EET will coordinate its activities with several donor agencies and international financial institutions who are stakeholders in the power sector as providers of technical assistance, grants and loans to the government and/or loans for new hydropower plants. The new transmission line from Georgia to Turkey should be operational by the first quarter of 2013 and the aim of EET is to have some level of electricity trading in place by that time.

2. Legal and Regulatory Framework in Georgia and Turkey to Support HPPs in Georgia

During the past year, the technical approach to addressing the enabling environment has undergone a significant shift. As required by HIPP’s Work Plan, HIPP had analyzed the legal and regulatory environment in both Georgia and Turkey to identify impediments to investment in Georgia’s HPPs. Further efforts were undertaken to work with MENR, with the Electricity System Commercial Operator (ESCO) and with the Georgian State Electrosystem (GSE) to clarify the legal and regulatory environment by suggesting improvements to the current legislation and Market Rules, and by drafting proposed amendments to the standard form contracts presented to potential investors.

However, it became apparent during the negotiations between Georgia’s and Turkey’s governments regarding a cross-border energy trade agreement that there were fundamental incompatibilities between Georgia’s electricity market structure and those of Turkey and South East Europe (SEE), which these improvements would not address. HIPP came to the conclusion that in order for Georgian HPPs to trade in the Turkish and SEE markets, it needed to create an energy trading platform compatible with the energy markets of Turkey and SEE. HIPP therefore developed the outline of a proposal to create an Electricity Trading Mechanism which was approved by the USAID Mission and presented to MENR at the end of 2011. Concurrently with that process, USAID also determined to create working arrangements with other international donors and financial institutions to share in the expense of creating the ETM. These new developments have meant that the focus has shifted from discrete improvements to one that focuses on harmonization of Georgia’s electricity market with those of its

neighbors. The summary of this year's achievements therefore needs to be put in the context of the evolution that has taken place in both USAID's and HIPP's thinking.

Below: USAID/HIPP and GSE representatives discussing Draft of IOA and Final Version of CBETA



Above: USAID/HIPP Team and GSE Management Board Member, Z. Ezugbaia, after signing of the CBETA

1. Issues

- The focus and objectives of the Renewable Energy Program of 2008 need to be sharpened and clarified
- Gaps identified in the legal and regulatory framework in Georgia increase perceived risks for investors and have not yet been addressed by the MENR
- The standard agreements (MOU, PPA etc) need to be brought up to international standards in order to be acceptable to lenders
- The divergence in market operations and design between Turkey and Georgia, particularly with respect to price formation and balancing obligations, could reduce the value placed on Georgian imports in Turkey unless mitigation measures are taken
- The Import-Export Regulation in Turkey is undergoing revisions that will hopefully remove perceived risks for lenders to Georgian HPPs but the revisions will not be completed until the end of 2011
- MENR has preferred to negotiate concessions on a case-by-case basis with individual investors in the HPPs of 100 MW or more, creating an uneven patchwork of agreements

6. REGIONAL POWER MARKETS

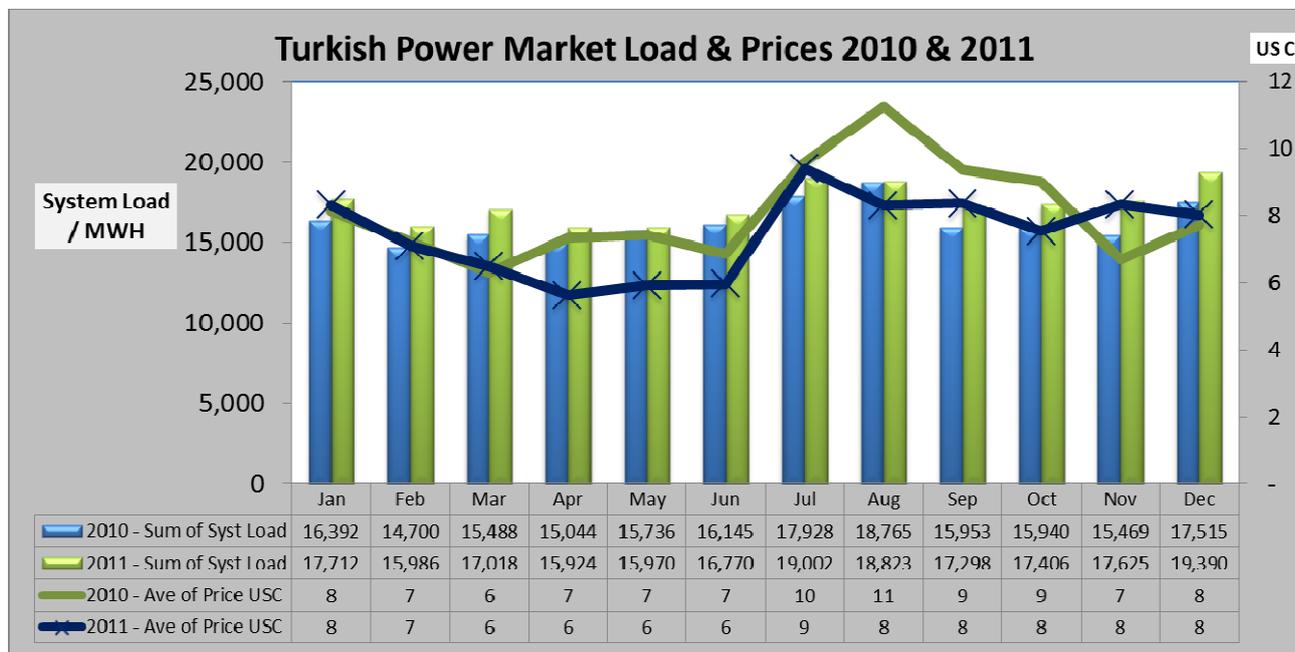
1. Introduction

Georgia's power system is up to 100% hydropower-based except during a few of the coldest months of the year. During the summer months, Georgia has excess hydropower. Therefore new hydropower plants must seek out energy buyers in foreign markets during non-winter months. In order to evaluate the economics of investment into Georgian hydropower plants, and to determine the risks and benefits of entering the various regional markets, developers should:

- Understand the design of foreign power markets and speculate on their future state.
- Determine how competitive prices are formed today and in the future and develop a model to estimate price forecasts.
- Determine how transmission and transit prices are formed and what price increases are expected.

HIPP's Special Studies Group completed several analyses related to the regional power market including:

- Cluster analyses for year 2 data of PMUM's wholesale prices, in order to classify peak, off-peak, and other relevant price groups in the Turkish power market.
- Price curve analysis for Turkey's Day Ahead Planning Market. 2010 and 2011 electricity prices and total system loads were observed on an average monthly, week day and daily hour basis.



- The Special Studies Group also analyzed the capability of new Georgian run-of-river projects to reduce or eliminate thermal power generation in Georgia. Different scenarios were considered for both demand and supply. The corresponding report was sent to USAID as a deliverable in October 2011.
- Domestic (i.e. Georgian) demand for electricity for the past 5 years was analyzed on a monthly basis. This analysis revealed that the average annual growth rate was less than 2.6% for the years under study; however, a significant finding was that summer time demand had increased four-five times faster than winter time demand. This study will be amended with 2011 data and findings will be compared to forecasts made in the document "Basic Directions of the State Policy in Energy Sector of Georgia", approved by Parliament of Georgia on June 7, 2006. In case of significant discrepancy, our findings could be updated and presented to MENR.
- The kWh cost of electricity generated by 12 of the potential plants HIPP is promoting was calculated so this cost could be compared to regional wholesale prices.
- HIPP published Turkish Power Market Monthly Reports for September, October, November and December 2011, highlighting the hourly, daily, weekly and seasonal prices in the Turkish wholesale power market, the hourly and yearly system loads and the competition to Georgian HPPs. The Special Studies Group also started to observe activity on the new (opened on 1 December 2011) Turkish Day Ahead Market (DAM) in preparation for deliverables to be completed in project Year 3.
- SSG published DAM reports for selected European Union power markets, including Romania, Slovenia and Hungary. These deliverables analyzed price data, trading volumes, and other headline market variables for the three countries. Under the EU's 2020 policy, EU member

countries are obliged to meet 20% of local demand from renewable energy sources. New Georgian HPPs may have an opportunity to capitalize on this opportunity.

2. Summary of Activities Completed and Accomplishments

| Summary of HIPP Related Activities | Accomplishments |
|--|--|
| <ul style="list-style-type: none"> • Key statistics concerning the Turkish electricity market were collected, analyzed and reported on. • The capability of new Georgian run-of-river projects to cut thermal power generation in Georgia was evaluated. Different scenarios were considered for both the demand and supply side. • Selected EU Day Ahead Market data for 2011 was collected, analyzed and reported on. | <ul style="list-style-type: none"> • Monthly reports describing developments on the Turkish Day Ahead Planning market in Oct, Nov and Dec 2011 were published • A Price Curve Analysis for the Turkish DAPM for 2010-2011 was published. • A report titled <i>Projected Thermal Power Requirements for the Georgian Power Market</i> was submitted as a deliverable in October 2011. • DAM reports describing market activity in EU member countries - Romania, Hungary and Slovenia – were published. |

7. LOCAL RENEWABLE ENERGY DEVELOPERS AND SERVICE PROVIDERS

1. Introduction

Small hydropower plants are often identified and analyzed by local energy developers interested in providing some or all of the equity in small investment projects. Local developers range from highly skilled power plant owners to inexperienced individuals looking for a good investment. In most cases, local developers need some assistance to support the development of their projects. Such assistance may include legal advice, business planning, engineering and design, procurement, licensing, environmental assessment, financing, construction and/or construction oversight, start-up and operations.

Local HPP developers who are active in the market include electricity distribution companies, industrial firms, engineering and design firms, and individuals and companies now or previously involved in engineering and construction.

In order to increase the profile of service providers and to make them easily accessible to potential developers seeking support, the HIPP team finalized the Database of Suppliers and Service Providers in Project Year 2, including , updating it with many new Local Suppliers and Service Providers. The companies include research institutes, designers and manufacturers, consulting and construction companies. There are 41 entities listed in the database and many more entities have been solicited for their company details so they can also be included. The Database can be found on the web page: www.hydropower.ge. An excerpt of the database is shown below.

| Acronym | Company Name | Company Profile | City | Post Co | Count | Telephone | Web Page | Address |
|---------------|---|--|---------|---------|---------|--------------------------------------|---|--|
| 1 HIPP | Hydropower Investment Promotion Project | HIPP One Pager.pdf | Tbilisi | 0179 | Georgia | 99532 224 45 70 | NA | 17 b Chavchavadze Avenue, Apartment 1 |
| 2 | SenSon Ltd. | SENSON (2).docx | Tbilisi | 0179 | Georgia | 99532 2 91 22 99 | www.senson.ge#http://www.senson.ge# | 50 I. Abashidze Street |
| 3 GIEC | Georgian International Energy Corporation | giec.docx | Tbilisi | 0179 | Georgia | 99532 210332 | www.giec.ge | 22, Delisi 3rd Tern |
| 4 | GIS Lab, Geo-Information Laboratory | gisLab.docx | Tbilisi | 0105 | Georgia | 99532 2505363 | www.gis-lab.ge#http://www.gis-lab.ge# | 1 Koroji Road, PO Box 0105 |
| 5 TAM | JSC TAM-Tbilisi Aircraft Manufacturing | | Tbilisi | 0136 | Georgia | 995 32 270 0135 | www.tam.ge | 181 B. Khmelnitsky Street |
| 6 | Georgian Hydro Energy | Georgian Hydro Energy.doc | Tbilisi | 0171 | Georgia | 995-95-400079 | NA | 34, Peking Street |
| 7 | Voith Hydro | Voith Hydro.docx | Tbilisi | 0102 | Georgia | 995 32 995 949 | http://www.voithhydro.com | 2, Adigeni Str. |
| 8 | Abedo Ltd. | | Tbilisi | 0179 | Georgia | 99532 104065 | Otar.turmanidze@yahoo.com | 87 Paliashvili Street |
| 9 WEG | World Experience for Georgia | WEG.doc | Tbilisi | 0179 | Georgia | 99532 102452 | www.weg.ge | 5 Paliashvili Street |
| 10 GEG | Gross Energy Group | Projects Gross Energy.docx | Tbilisi | 0177 | Georgia | 99532 399160 | www.gegroup.org | 45 Kazbegi Avenue |
| 11 AGH | Alliance Energy Inc. | Alliance Energy Inc.docx | Tbilisi | 0179 | Georgia | 99532 424181 | www.agh.ge | 47/57 M. Kostava Street |
| 12 | PERI Ltd. | Peri Ltd..docx | Tbilisi | 0160 | Georgia | 99532 528871 | http://www.peri.ge | 8 Chachava Street |
| 13 | ELECTRONICS - 07 Ltd. Co. | ELECTRONICS-activities-2011.docx | Tbilisi | 0160 | Georgia | NA | Under Construction | 6 Politkovskaya Street, Room 11/12 |
| 14 CENN | Caucasus Environmental NGO Network | CENN.docx | Tbilisi | 0105 | Georgia | 99532 751903 | www.cenn.org | 27 Betlemi Street |
| 15 GeoGraphic | GeoGraphic GIS & RS Consulting Center | GeoGraphic.docx | Tbilisi | 0160 | Georgia | 99532 382542 | www.geographic.ge | 27 Pekini Street |
| 16 APLR | Association for the Protection of Landholder Rights | | Tbilisi | 0160 | Georgia | 99532 206207 | www.aplr.org | 27 Pekini Avenue, V Floor |
| 17 TBSC | TBSC Consulting | TBSC.docx | Tbilisi | 0102 | Georgia | 995322 959019 | www.tbsc.ge#http://www.tbsc.ge# | 6 Marjanishvili Street, Green Building |
| 18 | Stucky Caucasus | STUCKY.docx | Tbilisi | 0179 | Georgia | 99532 22 60 43 | http://www.stucky.com | 17, Paliashvili Str |
| 19 | Sakenergoremonti | Sakenergoremonti.docx | Tbilisi | 0106 | Georgia | 99532 65 85 01/02/03 | www.sakenergoremonti.ge | 1, Kaskadi Street |
| 20 Gamma | Scientific Research Firm Gamma Ltd | Gamma.docx | Tbilisi | 0192 | Georgia | 99532 330274, 333268, 294939, 364045 | http://www.gamma.ge/# | 9 M. Aleksidze Street |
| 21 GWMI | Georgian Water Management Institute | Institute of Water Management.docx | Tbilisi | 0179 | Georgia | 99532 224094, 227200 | http://gwmi.ge/MamboV4.6.2/ | 60 Chavchavadze Avenue |
| 22 | Hydro Service | HYDROSERVICE.docx | Tbilisi | 0159 | Georgia | 99532 527925 | NA | 17, Sarajshvili street |
| 23 | Electrogamartva | | Tbilisi | 0152 | Georgia | 99559114646 | NA | 3 Varketili, 2nd micro-district. 15/17 |

An excerpt from HIPP Local Suppliers and Service Providers Database

2. Activities completed and accomplishments

| Summary of HIPP Related Activities | Accomplishments |
|--|--|
| <ul style="list-style-type: none"> Met many times with local developers Worked closely with several developers on business plan development for HPP sites and on deal structuring Identified many service providers in the sector and contracted some of them for services (such as GIS, hydrological assessments, geological assessments) Matched developers with investors related to specific HPP sites | <ul style="list-style-type: none"> Produced a database of local service providers |

3. Issues

HIPP is continuing efforts to formally solicit expressions of interest for inclusion in the Database of Local Service Providers from local companies and individuals through local media advertising, e-mail, and other channels.

8. FOREIGN INVESTOR APPETITE FOR GEORGIA HPPs

1. Introduction

Strong regional economic growth and increasing demand for electricity is stimulating international investor appetite for Georgian hydropower resources. Investors from the region and especially from Turkey are looking for long term energy supplies and appear willing to invest in hydropower.

Georgia was able to attract foreign investors willing to sign MoUs for HPPs under 100 MW, or Implementation Agreements for HPPs of 100 MW or larger. To date, the Ministry of Energy and Natural Resources has signed MoUs totaling more than 1800 MW – representing potential investment of approximately \$3 billion. Unfortunately, most sites currently under MoU lie dormant. The reasons for the cessation or delay in development include the absence of an enabling environment, including an energy trading mechanism to enable Georgian HPPs to export electricity to regional power markets.

Over Project Year 2, HIPP’s investment promotion activities were conducted with the aim of continuing to attract potential developers who have 1) the experience and capability to properly design, construct and operate HPPs and 2) adequate capital to complete projects (i.e. technically and financially qualified). While working on identifying and resolving enabling environment issues, as well as seeking out new investors, HIPP’s investment promotion team updated developers that had been contacted over Project Year One with new developments in energy sector of Georgia and export market opportunities.

By the end of Year Two, HIPP’s activities had resulted in investor commitments to construct run-of-river hydropower plants with a total capacity of over 180 MW, at an estimated investment cost of approximately US\$380 million.

Tsageri HPP

A pre-feasibility study developed for Tsageri HPP by HIPP generated great interest from international developers, including from privately owned Turkish construction company, Kolin Construction. Kolin signed a Memorandum of Understanding with the Government of Georgia committing it to investing in the development of a hydropower plant on the site.

Kolin, which intends to construct a 122 MW run-of-river hydropower plant on the Tskhelintskali River, plans to commence building work on the site in the summer of 2012. The estimated cost of development is between \$200 to \$300 million. The plant is expected to generate approximately 600 GWh of clean electricity per year.

GEDF & GGEDC

To facilitate investment in and development of the country’s renewable energy sector, the Government of Georgia took a decision to establish the Georgian Energy Development Fund (GEDF) and Georgian Green Energy Development Company (GGEDC). These organizations were created to help expedite investment in renewable energy projects in Georgia, and particularly hydro power plants. HIPP has actively supported GEDF and GGEDC and as a result 3 hydropower plants (identified and studied by HIPP) are currently under development. GEDF is implementing Machakhela 1 and Machakhela 2 HPPs, and GGEDC is developing Tsablari 2..

2. Activities Completed and Accomplishments

| Activities Completed | Accomplishments |
|--|---|
| <ul style="list-style-type: none"> ▪ Developed a database to register and track all investors contacted by HIPP ▪ Conducted one on one meetings with ADB, KfW, EBRD, WB, IFC and EU delegation regarding the enabling environment for energy sector investment in Georgia ▪ Turkey and UK road shows ▪ Conducted initial market sounding of investors in USA | <ul style="list-style-type: none"> ▪ Investor database refined and updated ▪ IFI roundtable held to identify issues that need to be resolved on enabling environment to enable project financing ▪ More than 500 potential investors contacted. ▪ MoU signing with MENR and Kolin Construction ▪ GEDF and GGEDC investing in HIPP’s projects |

3. Issues

There is real interest from potential developers in Georgian HPP opportunities, and from companies operating in Turkey in particular. Most investors wish to take advantage of the high capacity factors Georgian plants offer as a means to securing relatively low cost energy supplies to meet their long term goals. However, there are several significant impediments to investment commitment, including, for example, the absence of an electricity trading mechanism to enable commercial power trade between Georgia and Turkey.

9. OUTREACH AND PROMOTION

1. Introduction

In order to disseminate information and alert investors to small- and medium-sized run-of-river investment opportunities, HIPP designed, organized and conducted the following promotional activities in Year 2: Road Shows, One-on-One Investor Meetings, Investor Conferences, Direct Marketing, Web Advertisements and Media Awareness Workshops.

HPP reached a significant project milestone in Year 2, having contacted more than 500 potential developers around the world by year-end. Contact details for each are stored in the project's Investor Database, which is updated on a permanent basis and serves as a digital rolodex of potential investors. Currently it lists 509 contacts from 47 countries. The database includes institutional investors such as pension funds, private equity firms and major banks, boutique wealth management firms, specialized hydro power developers, electricity wholesalers, aluminum producers, and others. Contacts range in size from individual entrepreneurs through to large conglomerates.

Below: Snapshot of the new Investor Database:

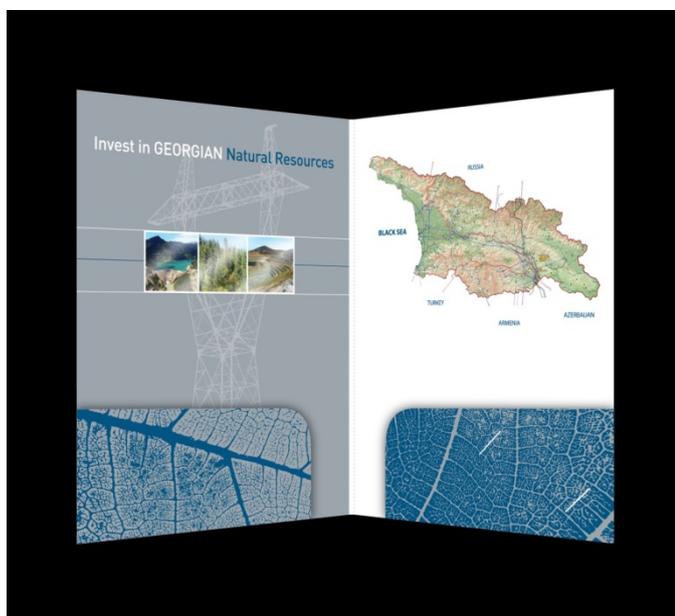
| Investor Database | | | | | |
|-------------------|---|------------------------|--|--|---|
| # | Organization | Contact Person | Job title | E-mail address | Phone Number |
| 1 | 3E | Geert Dooms | Turkey Representative Office - Istanbul | (blank) | + 90 541 583 7131 |
| | | Ozgur Orsecik | Turkey Representative Office | (blank) | +90 532 473 0193 |
| 2 | 8KU RENEWABLES GMBH | Torsten Musick | Turkey Representative Office | renewables(at)8ku.de | 49 (0) 30 203 8904-81 |
| | | Dietmar Wolf | Business Development Officer | dietmar.wolf@de.abb.com | 43 (0) 1 601 09-2034 / 43 (0) 676 8533 2034 |
| 4 | Actis Energy Fund | Alasdair Maclay | (blank) | amaclay@act.is | +44 (0)20 7234 5052 |
| | | Ender Çakmak | Deputy General Manager | melek.gunay@adoenerji.com | 0242 227 49 90 |
| 6 | Advanta Investments | Amanda Warrender | (blank) | info@advanta-investments.com | 90 392 815 9827 or 90 533 869 1278 |
| | | Ekin Niksarli | Business Development Manager (Regional) | ekin.niksarli@aes.com | (blank) |
| 8 | AES ELEKTRİK ENERJİSİ TOPTAN SATIŞ A.Ş. | (blank) | (blank) | (blank) | (216)578-85-92 |
| | | Firat ÇEÇEN | Chairman | info@ictasenerji.com.tr | +90 312 417 94 40 |
| 10 | AES-İÇTAŞ Energy Generation and Trade | Birkan Özcan | CFO | bozen@icholding.com.tr;info@ictasenerji.com.tr | +90 312 417 94 40; +90 312 417 09 57 |
| | | Luca Gorlero | Managing Director | lg@affinitasconsulting.ae | 971 (0)7 204 1272 |
| 12 | Agaoglu Energy | Tolga Guneri | General Manager | info@agaoglu.com.tr | 90 (216) 687 11 11 |
| | | Kor Ozay | Project Coordinator | 90 (216) 687 11 55 | (blank) |
| 14 | AGE Elektrik Enerji | Atilla Onen | Chairman | age@age.com.tr | (0 312) 468 82 40 |
| | | Sarri Varual Bilen | Civil Engineer | enerji@age.com.tr ; s.bilen@age.com.tr | 90 312 468 82 40 |
| 16 | Air Liquide | Pierre Etienne Franc | Chairman of the Board of the European Indu | (blank) | (blank) |
| | | Biröl Ergüven | Director of Sales and Trading | berguven@akenerji.com.tr | 212 249 8282 (ext. 1113) |
| 18 | Akenerji Elektrik Üretim A.Ş. | Gamze Dinçkok Yucaoglu | Financial Audit and Risk Management Direct | gdinckok@akenerji.com.tr | 212 249 8282 (ext. 1113) |
| | | Ömer Dinçök | Chairman | naltintasi@akenerji.com.tr | (212) 249 82 82 |
| 19 | AKSA | Cemil KAZANCI | Chairman | aksa@aksa.com.tr | + 90 212 478 66 66 |

2. Promotional Materials

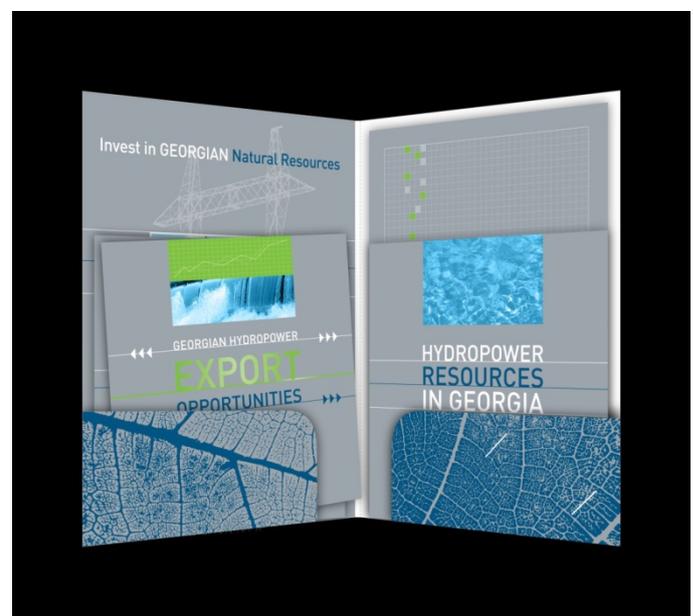
HIPP updated USAID's Energy Sector Map of Georgia, in cooperation with MENR, to show the latest hydro project site status, and to add certain components in the Georgian language. This version of the map was used by the Minister of Energy during the inauguration of two hydropower sites. Both the inaugurations and briefings got extensive local television coverage.

HIPP produced further high quality marketing collateral for the Ministry of Energy and Natural Resources (MENR) over project Year Two, including:

- A folder for the MENR in which to present promotional brochures and materials
- An Investor Guide
- An update of the BSTNP brochure
- A brochure showcasing Georgia's hydropower potential
- A brochure describing Georgian Hydropower Export Opportunities



Folder to present MENR's promotional material



Investor Guide and Promotional Triplet Brochures on Georgian Hydropower Resources and Export Opportunities

3. Promotional Activities

HIPP organized an Investor Road Show in London, in June 2011, for MENR. The main event of the road show was the Global Energy Leaders Summit. The Ministry of Energy and Natural Resources was an Associate Sponsor of the conference through HIPP funding. Minister Khetaguri was invited to participate as a panelist/speaker at the event and was able to present the case for Georgian hydropower through his broader participation and status at the conference. During the Road Show one on one meetings were arranged between investors and Ministry of Energy and Natural Resources staff, headed by Minister Khetaguri.

Below: Minister Khetaguri participating in Global Energy Leaders Summit



Over Year 2, HIPP also organized a number of promotional road shows and activities in Turkey. The main objectives of these visits were:

- To visit strategic investors to present hydropower investment opportunities.
- To meet potential off takers in order to provide and receive information on regional power markets, import opportunities and electricity demand;
- To speak with Turkish energy market stakeholders to gain additional information on market structure and other technical and legal aspects of the Turkish power market
- Participation in Turkish International Renewable Energy Congress.



Above: Companies who expressed their interest in Georgian hydropower.

Hydro 2011 – Prague, Czech Republic

HIPP participated in the annual Hydropower Congress organized by the International Journal on Hydropower. Practical ways to advance hydro projects towards financial closure, ensuring that governments get the maximum benefits from their hydro assets and capacity building in the developing world, were among the themes selected for panel discussions and workshops during the event. During the sessions, HIPP had an opportunity to discuss Georgian hydropower investment opportunities with delegates from many countries, including heads of national utilities and regional power and water boards, powerplant owners and operators, consultants, financiers and contractors.



Above: HYDRO-2011 Panel discussion on Financing of Hydropower Plant Projects

Media Awareness Workshop

HIPP provided assistance to the MENR in organizing a public outreach seminar covering activities undertaken by the Ministry in the context of renewable energy development in Georgia.

The goal of the workshop was to: strengthen and promote cooperation between the energy sector and media representatives in order to foster the timely and accurate dissemination of information on developments in the sector; increase the media's awareness and understanding of issues related to the energy sector and the activities of the Ministry and USAID to stimulate and secure international investments into Georgia's small and medium-sized hydroelectric power market; and investment projects implemented and planned in the hydropower sector.

As a result, numerous articles were published in the local press on hydropower investment opportunities, and the advantages of run-of-river hydropower plants, in terms of their limited social and environmental impact.



Above: Opening Speech of the Minister

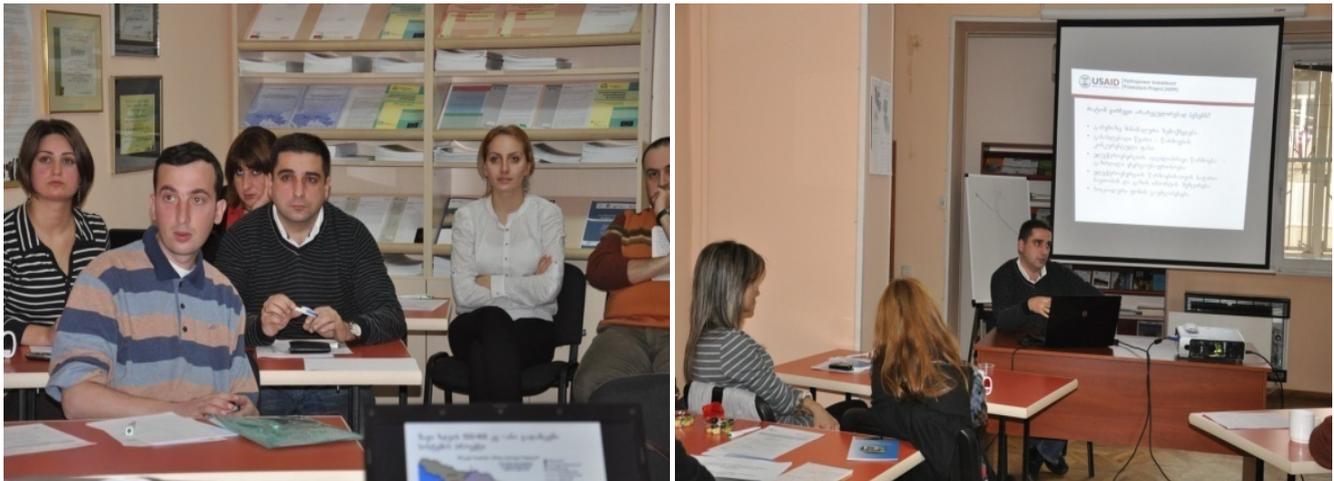
Above: Minister Khetaguri Introducing HIPP Presentation



Above: Georgian Press Representatives participating in HIPP Media workshop

HIPP participated in various investor conferences and seminars, including a Seminar on Investments in Georgia organized by the Georgian National Investment Agency and the NGO Green Alternative Workshop on Hydropower Plants.

Below: G.Chikovani from HIPP, participating in the Workshop on hydropower plants organized by NGO Green Alternative



HIPP took part in a Seminar on Norwegian–Georgian cooperation on hydropower organized by MENR, The Royal Norwegian Embassy in Baku, and INTPOW (cooperation between the Norwegian Authorities and the Norwegian renewable industry.)

Below: Seminar on Norwegian–Georgian cooperation on hydropower



4. Activities Completed and Accomplishments in Year 2

| Summary of HIPP Related Activities | Accomplishments |
|---|---|
| <ul style="list-style-type: none"> ▪ Development of Information Memorandum for HPP offerings ▪ Development of HPP promotion strategy ▪ Development of promotional materials (brochures, pamphlets, presentations, booklets, etc.) ▪ Investor Road shows with MENR ▪ Design and management of Hydropower Investor Web Portal for the MENR ▪ Public awareness and media workshops ▪ Skills assessment and organizational development for the MENR’s Investment Projects Department | <ul style="list-style-type: none"> ▪ Investment Promotion Strategy ▪ Information Memorandum (Part 1,2 and 3) ▪ “Black Sea Transmission Network Project” brochure (II version) ▪ “Hydropower Resources in Georgia” brochure ▪ “Investor Guide” brochure ▪ “Georgian Hydropower Export Opportunities” brochure ▪ Georgian Energy Map update ▪ 20 HPP Project Profiles (2-pagers) ▪ MENR Hydropower Investor Web Portal design and development ▪ Workshops and training for MENR staff |

5. Issues

According to a market sounding survey conducted by HIPP in October, 2011 US energy companies and developers currently have very little to no appetite for investment in Georgian hydropower. Due to these survey results, a planned US Road Show was canceled.

10. EVALUATION OF KEY INDICATORS

Assessment of Progress to Date against Each Indicator

The table below indicates the progress made to date for each of the indicators specified in the HIPP Monitoring and Evaluation Plan approved by USAID.

| # | Key Indicator / Program Result | Work Plan Task Linkage | Source of Data | TARGETS | | Actual | Comments on results |
|---|---|------------------------|---|-----------------|---------------|---------------------|--|
| | | | | Life of Project | Year 2 | Months 1-24, Year 2 | |
| 1 | Bonds (in \$) on deposit to secure rights for new HPP site development | Cross-cutting | MENR contract records; project confirmation | \$70 million | \$2.2 million | \$2.2 million | Kolin Construction put down a bank guarantee for the Tsageri HPP. (The amount of the deposit per MW was very small compared to the amounts required for HPP plants less than 100 MW.) The amount would normally have been approximately 20.7 million USD |
| 2 | Public and private resources (\$) leveraged by USG for energy infrastructure projects | Cross-cutting | MENR records; project verification | \$500 million | \$88 million | \$88 million | Equity investment was provided by investors for Tsageri HPP and the Machakhela HPP Cascade. Feasibility studies must be completed before debt financing is leveraged. |
| 3 | New capacity (in MW) under development with USG assistance | Cross-cutting | MENR records; with project verification | 400MW | 189 MW | 189 MW | Kolin Construction has signed anMoU with the GoG for the 122 MW Tsageri HPP and the GEDF (GOGC) is developing the 50 MW Machakhela HPP Cascade while GGEDC is developing Tsablari; prefesability studies for both projects were created by HIPP. |
| 4 | Amount of newly available energy, projected (in TWh) | Cross-cutting | MENR records; project verification | 1.4 TWh | 0.9 TWH | 0.9 TWH | Estimated annual production for Tsageri and Machakhela HPPs. |
| 5 | Ratio of newly available energy produced during | Cross-cutting | MENR records; project verification | 20% | 0 | 0 | This indicator is irrelevant in that HIPP is to provide support of |

| # | Key Indicator / Program Result | Work Plan Task Linkage | Source of Data | TARGETS | | Actual | Comments on results |
|----|--|------------------------|---|-----------------|--------|---------------------|---|
| | | | | Life of Project | Year 2 | Months 1-24, Year 2 | |
| | winter months consumed domestically | | | | | | initial development of new projects of which none will be operating in such a short period as the contract term. |
| 6 | Ratio of self-generated energy (projected) to total amount of gas and electricity consumed (projected) | Cross-cutting | MENR calculations, project verification | 30% | 26% | N/A | This indicator is irrelevant in that HIPP is to provide support of initial development of new projects of which none will be operating in such a short period as the contract term. |
| 7 | ICG active; meetings not less than once/quarter | Task 1 | n/a | Yes | Yes | Yes | USAID and the MENR created the HIPP Steering Committee in 2011 with 3 related working groups. The Steering Committee meets once a month and several stakeholders attend the meetings. |
| 8 | Number of studies, research, analytical papers produced | Task 1 | Project records | 15 | 17 | 32 | |
| 9 | Number of sites validated as suitable for investment promotion | Task 1 | MENR, project verification | 80 | 73 | 143 | HIPP has put 143 HPP sites through initial technical screening and 93 sites are considered to be viable. |
| 10 | Number of energy agencies undertaking capacity strengthening | Task 2 | Project records | 3 | 4 | 5 | ESCO, GSE, MENR, GNEWRC, GEDF |
| 11 | Number of promotional activities conducted | Task 3 | MENR Records; project confirmation | 30 | 50 | 55 | <ul style="list-style-type: none"> • Project Launch • IFI Event 1 • IFI Event 2 • Market Sounding - Turkey • Brussels Conference • Statkraft Road Show to |

| # | Key Indicator / Program Result | Work Plan Task Linkage | Source of Data | TARGETS | | Actual | Comments on results |
|----|--|------------------------|------------------------------------|-----------------|-------------|---------------------|---|
| | | | | Life of Project | Year 2 | Months 1-24, Year 2 | |
| | | | | | | | Georgia <ul style="list-style-type: none"> • Turkey Road Shows (2) • Azerenerji debriefing • Media Outreach • Public Awareness Workshops(4) • Investment in Georgia Retreat • One on ones with potential investors (50+) |
| 12 | Variety of promotional materials detailing HPP opportunity produced and disseminated | Task 3 | MENR records; project confirmation | 15 | 41 | 46 | 1) 12 HPP 2-pagers 2) Georgian Energy Sector Presentation 3) Transmission Brochure 4) Transmission Brochure version 2 5) Hydro Investment Opportunities 6) Export Opportunities 7) Information Memorandum – Part 1 8) 12 Pre-feasibility Study reports 9) 15 Project Identification Study reports 10) Investor Guide |
| 13 | Number of financial institutions, companies and investors exposed to HPP opportunities | Task 3 | MENR records, project confirmation | 500 | 409 | 509 | |
| 14 | Number of site-specific HPP studies | Task 4 | Project / USAID records | 40 | 3 | 27 | |
| 15 | Resources leveraged to conduct HPP studies | Task 4 | Project / USAID records | \$3 million | \$6 million | \$ 6.5 million | HIPP assisted Peri Group in establishing a relationship with USTDA re request for assistance on a feasibility study. HIPP also |

| # | Key Indicator / Program Result | Work Plan Task Linkage | Source of Data | TARGETS | | Actual | Comments on results |
|---|--------------------------------|------------------------|----------------|-----------------|--------|---------------------|---|
| | | | | Life of Project | Year 2 | Months 1-24, Year 2 | |
| | | | | | | | <p>provided PERI with assistance in completing the application for assistance from USTDA.</p> <p>HIPP has assisted GEDF in preparing for the tender of for feasibility studies, detailed designs and design project oversight.</p> <p>HIPP has also supported AEG in seeking out investors for their first 3 small HPPs (value not shown in the table).</p> |

USAID Hydropower Investment Promotion Project (USAID-HIPP)

Deloitte Consulting Overseas Projects - HIPP

11 Apakidze Street, Tiflis Business Center

Tbilisi, 0171, Georgia