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EVALUATION OF THE GEORGIA ENERGY SECURITY INITIATIVE (GESI)

AUGUST 2010

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GEORGIA

EVALUATION OF THE GEORGIA ENERGY SECURITY INITIATIVE (GESI)

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SOCIAL IMPACT, INC

IN COLLABORATION WITH MANAGEMENT SYSTEMS
INTERNATIONAL

USAID/CAUCASUS OFFICE OF ENERGY AND
ENVIRONMENT

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DISCLAIMER:

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.

Acronyms

BoG	Bank of Georgia
CBO	Community-Based Organization
DCA	Development Credit Authority
ESCA	Energy Sector Consumer Associations
GEL	Georgian Lari
GESI	Georgia Energy Security Initiative
GoG	Government of Georgia
GSE	Georgian State Electrosystem
GWHAP	Georgia Winter Heating Assistance Program
IDP	International Displaced Persons
KWH	Kilowatt Hours
LOP	Life of Project
M&E	Monitoring and Evaluation
MSI	Management Systems International
NGO	Non-Governmental Organization
PPP	Public-Private Partnership
SI	Social Impact, Inc
SME	Small and Medium Enterprise
UEDC	United Electricity Distribution Company
USAID	United States Agency for International Development

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EXECUTIVE SUMMARY

USAID's purpose in evaluating the Georgia Energy Security Initiative (GESI) was to assess the Program's impact at the national level and analyze from an energy perspective its benefits for the population that was under-served.

The GESI Project was designed to improve the overall performance of the electrical energy sector and assist those parts of the population that were underserved by it. Several project tasks addressed technical electricity generation and distribution issues. Other tasks concentrated more on solutions aimed at addressing social inequities and improving the economic well-being of individuals or communities. GESI's Life of Project (LOP) was from 26 March, 2003 until October, 2007.

As designed, GESI had five components:

1. Restoration of hydropower;
2. Electricity distribution improvement
3. Georgia Winter Heating Assistance Program (GWHAP);
4. Credit Facility development; and
5. Community development.

Overall Objectives

"Through GESI, USAID sought to support the Government of Georgia to implement a comprehensive national energy strategy." Assistance under GESI was targeted towards: improving the supply of indigenously produced power and increasing the revenue collection rate for energy delivered.

Evaluation Methodology

The Team used a standard USAID evaluation methodology, starting with "Findings," moving on to "Conclusions," which in turn led to "Recommendations." Because the evaluation team was trying to capture the impact of actions and programs that had ended between three to seven years previously, most data and information available to the Team came from knowledgeable informants familiar with the power utilities and other aspects of the Project, or from Project reports. While Project reports were available, they generally did not supply the kind of data series needed for evaluation purposes. Third party data from the beginning of the project were not found. USAID-generated design data from before the project commenced was not available.

Financing

GESI cost approximately \$33 million dollars. The direct costs, the amount explicitly spent per component, accounts for approximately 69% of total project costs. This provides an important baseline for the evaluation. The difference between the project's initial budget and the money actually spent is illustrated later in this document. Funds

were shifted amongst components as USAID and PA Consulting learned more about the types of interventions that would be most effective in the Georgian power sector circa 2003.

Summary Conclusions

GESI's impact on distribution reform and commercialization in the Georgian economy was significant, because to some extent it served as a model alongside other parallel and concurrent reform activities in other utilities in Georgia and across the region. Reforms in electrical distribution and successful commercialization of power utilities had a huge impact on the economy in general.

The Project achieved its larger goals and objectives. The Program was initiated to “Implement a comprehensive national energy strategy” and improve the overall performance of the electrical energy sector while assisting those parts of the population that were underserved by it. GESI successfully accomplished this objective.

Moving forward, the following recommendations are offered:

- Consider building in a Hedging Strategy or suitable flexibility into all its projects;
- Keep program designs and objectives simple;
- Consider expanded monitoring, evaluation, and feedback loops (lessons learned);
- Improve project filing and reporting, to allow for better evaluations in the future;
- Explore the utility of enhanced demand-side management and energy conservation;
- Assess program risks carefully, keeping the experience of GESI in mind;
- Assess a shift of focus from rural to urban municipalities for development projects;
- Analyze SME banking needs;
- Consider the utility of business development extension services for SME-type programs; and
- Consider the role of local contributions and fees for service.

1 INTRODUCTION

1.1 Purpose of the Evaluation

USAID's purpose in evaluating the Georgia Energy Security Initiative (GESI) was to assess the impact of the Program at the national level and analyze its benefits for populations under-served by the electrical energy sector. USAID Georgia's Economic Growth (and Energy Offices) currently are replacing their portfolios of activities, and these assessments will be used to facilitate future project focus and help with the design of work plans.

1.2 Background and Summary Description of GESI Project

The Georgia Energy Security Initiative (GESI) hereinafter referred to as the GESI Project (or sometimes as "the Program"), was implemented by the PA Consulting Group (PA Consulting). The Program was designed to improve the overall performance of the electrical energy sector and assist underserved populations. Several project tasks addressed technical electricity generation and distribution issues. Other tasks concentrated on solutions aimed at ameliorating social inequities and improving the economic well-being of individuals or communities. The project was initially designed in 2002 and early 2003, building on substantial experience that USAID had acquired through its work in the Georgian energy sector through the 1990s. The GESI Project ran from 26 March, 2003 until October, 2007.

As originally envisioned, the GESI Project included the following tasks:

Task 1: Restoration of Hydropower, including so-called "Quick Hits."¹ However, due to concerns about the lack of adequate progress by the Government of Georgia (GoG) prior to the Rose Revolution on energy reform, the U.S. Government cancelled support for this component on October 1, 2004.

Task 2: Electricity Distribution Improvement including financing of a management team or the United Electricity Distribution Company (UEDC) and the formation of one or more Distribution Service Areas in which aggressive commercialization activities would take place;

Task 3: Georgia Winter Heating Assistance Program VI² (GWHAP) continued a cash subsidy program for one additional year, while designing ways

¹ "Quick Hits" were defined as measures that could be taken rapidly to introduce additional capacity and energy into the electricity system. This also included capital maintenance and full rehabilitation of at least one medium-sized hydro-generation unit.

² The Georgia Winter Heating Assistance Program appears initially to have started in 1999, and was implemented through a series of yearly tranches. PA Consultants held the contract for the third and fourth years of GWHAP, prior to the commencement of GWHAP. With the completion of the 4th Tranche, GWHAP IV, PA Consulting assumed responsibilities for GWHAP V and VI under GESI, during the winter of 2003/04 to 2004/05.

to phase out of USAID-funded cash subsidies and seeking other ways to address the energy needs of vulnerable and socially critical institutions;

Task 4: Credit Facility Development to develop ways to provide financing to the private sector in order to spur energy project development, in turn supporting business and economic development— including renewable energy, energy efficiency and other technologies (e.g., a new industrial process); and

Task 5: Community Development would identify communities in which economic development and social welfare could be enhanced through mobilization activities and community "buy-in" to take control of their own energy, and identify social and economic development needs.

1.3 Evaluation Methodology

To carry out the evaluation of the GESI Project, Social Impact and its sub-contractor, Management Systems International (MSI) sent a team of three expatriates to Georgia, where they were joined by a fourth, Georgian expert. In Georgia, the evaluation lasted from June 12 until July 10, 2010. The GESI evaluation team held meetings in Tbilisi beginning on the 13th of June, starting with technical staff from USAID, and then worked out to a short-list of specialists that had been pre-identified by the Mission. Field travel and interviews were held from June 23 to 29, 2010.

The final tasks of the GESI Project ended in October, 2007, nearly three years before the start of the evaluation; data and information was difficult to gather. Most of the data and information available to the team came from knowledgeable informants familiar with the power utilities involved with producing and distributing electricity. Information also came from other key informants who could speak to the other important components of the project, including the Georgia Winter Heating Assistance Program, and the Community Development component. To carry out this assessment, the evaluation team conducted more than 100 meetings and interviews, and traveled more than 2,500 kilometers to four regions of Georgia. For all interviews, two or more members of the team were present. To carry out the field assessment, the GESI evaluation team was divided: Team A consisted of Hans Jansen, team leader and an electrical engineer, and David Garner, a public administration and policy analyst. Team A primarily focused on components # 1, # 2, and # 3. This team traveled more than 1,200 km and visited seven offices that had been part of UEDC, scattered across three of the regions where it had operated. To develop a broad understanding of the power sector, the team met with representatives of four power utilities during the course of the evaluation.³ To more fully understand the energy sector context, Team A conducted thorough interviews with staff at Energo-Pro, the successor company to UEDC. Energo-Pro purchased the distribution system initially run by UEDC through a contract to USAID for the Government of Georgia. Team members also met with the privately owned public utility "Telasi" that

³ These included current staff of Telasi, Energo-Pro, GSE, and staff of UEDC

supplies power to Tbilisi,⁴ servicing approximately 30% of the total customers across Georgia; and they met with GSE, the privately owned power utility responsible much of the power to Georgia.⁵

In the meantime, GESI Evaluation Team B—Dr Robert Batt, an economist and petroleum engineer, and Shalva Kokochashvili, a Georgian civil engineer—looked primarily at components # 4 and # 5. Team B traveled nearly 1400 km, and visited four communities while analyzing the impact of the Credit Facility and the Community Development programs linked together under the umbrella of the GESI Project.⁶

1.4 GESI’s Overall Project Objectives

Starting in 1996, and for the six years that preceded the GESI Project, the U.S. Government provided extensive support for energy sector reforms in Georgia. Despite this assistance, by 2003 energy sector operations showed little improvement: there were daily power cuts, and the supply of electricity and gas declined every year. The GESI Project was intended to help reverse this trend. Through GESI, USAID sought to support the Government of Georgia in efforts to implement a comprehensive national energy strategy. Assistance under GESI was targeted towards improving the supply of indigenously produced power and increasing the revenue collection rate for energy delivered. The program was designed specifically to help those communities and customers that supported this energy initiative and sought to improve the cost effectiveness of supply. The Project was intended to examine a complete range of energy sources. Initially, hydropower plant upgrades and rehabilitation were expected to be the primary targets for the generation of power.

According to the specific language of the PA Consulting contract with USAID for the implementation of the GESI Project, “Through the [G]ESI contractor, targeted assistance will be provided to [i] improve access to sources of energy, [ii] rehabilitate the generation units, [iii] improve distribution systems, [iv] install billing equipment in distribution companies, and [v] possibly integrate alternate energy into communities where access to low cost heating fuels, other than wood, remain difficult to secure. [vi] Training in revenue collection and overall project management also may be part of these efforts. [vii] Installations of renewable and alternative energy resources activities will be considered as viable alternate energy sources if it can be shown that it can be replicated and proved financially feasible. [viii] The [G]ESI contractor will investigate the

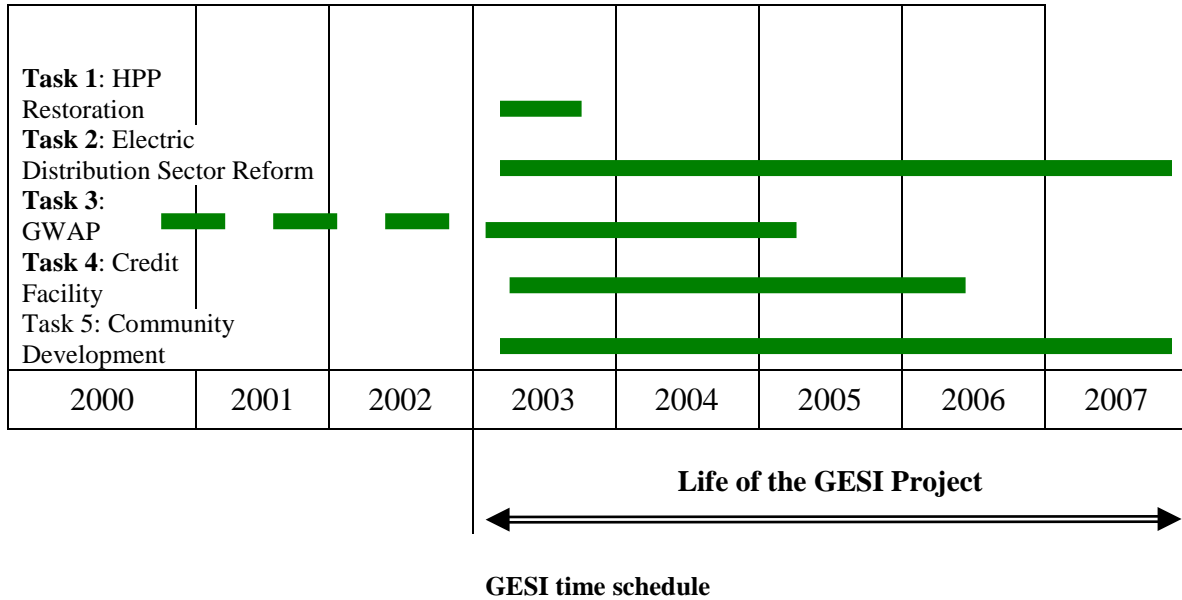
⁴ Telasi provides power to 420 000 customers in Tbilisi, the capital city. Energo-Pro provided power to about 1,300,000 customers outside of Tbilisi in 6 Regions of Georgia. The two utilities operate in parallel. GSE supplies power to Energo-Pro and Telasi, and imports electrical power from Russia in order to help meet energy demands in Georgia.

⁵ See Appendix 4 for a complete list of contacts and interviews. Individual names are followed by one or more numbers, corresponding to the Project Component(s) about which they were interviewed.

⁶ Further details of the evaluation methodology and approaches for each Project Component are described more fully below, and in the Appendices.

practicality of including demonstrations of firewood, biomass, solar, etc – and, given the feasibility of applications, be tested within a target group of consumers.”⁷

1.5 Component Implementation Activities



1.5.1 2003 (Project Year 1)⁸

Task 1: The hydropower restoration component was planned as a four year initiative. Other components are planned to last only two years. Task 1 ceased October 1, 2003

Task 2: At the UEDC, the PA team planned to improve daily operations, implement a financial management and accounting system, and prepare the utility for a long-term management contract and future privatization.

Task 3: The GWAP VI program supported the privatization process and energy sector reforms, and provided a social safety net for the most vulnerable households⁹ during the winter months.

Task 4: The PA team believed it was premature to organize a separate fund for the GESI Credit Initiative, and suggested using the budgeted \$950,000 to create a toolkit to demonstrate deal flow, and train banking staff and borrowers.

⁷ PA Contract with USAID. “Section C: Statement of Work, Georgia Energy Security Initiative,” March 26, 2003, p. C – 2. Further details of the Statement of Work are given in Appendix # 2.

⁸ Data for 2003, 04, 05, and 06 come from annual work plans. Data for 2007 comes from PA’s Final Report.

⁹ The most vulnerable was estimated to be about 15% of the population.

Task 5: GESI's team endeavored to work with communities to develop energy alternatives and natural resource management practices that would relieve pressure on forests and stimulate economic growth.

1.5.2 2004 (Project Year 2)

Task 2: The second year of PA's management contract at UEDC saw major improvements. Collections reached 36%, UEDC paid its first tax bill, and payment for purchased electricity went from 9 to 34.8 million GEL, and \$2 million in foreign debt. 58 branches were consolidated into six regional branches; theft and corruption was addressed by the "commercial security service unit." Communal metering began and some individual metering was installed.

Task 3: Focus shifted implementation of GWHAP to the regions and involved work with the Ministry of Health, Labor and Social Protection and other relevant entities.

Task 4: The PA team established a "toolkit" of financing mechanisms to demonstrate deal flow and train banking staff. With an allocation of \$950,000, funding was divided into three areas: a grant element, a soft loan program, and a commercial credit line.

Task 5: The community development effort worked on plans in collaboration with the credit facility (Component # 4) providing capacity-building in all 10 communities.

1.5.3 2005 (Project Year 3)

Task 2: Electricity distribution improvements were reported by PA to be remarkable, [but] "the challenges still to be faced are substantial."

Task 3: The Georgia Winter Heating Assistance Program VII completed operations successfully by the end of the winter of 2004/05. Subsidy vouchers were distributed to an estimated 15-20% of Georgian population. GWHAP effectively ceased at the end of the winter of 2004/05.

Task 4: Evolution of the Credit Facility from a concept into a developed program for financing energy related, community based enterprises posed new challenges for the GESI team.

Task 5: Developed final geotechnical engineering plans, conducted environmental assessments, addressed compliance issues relating to Georgian regulatory and environmental requirements, and worked on construction of energy intervention projects for Kekhijvari, Likhauri and Spasovka communities.

1.5.4 2006 (Project Year 4)

Task 2: UEDC gains control of 110kV and 35 kV systems; audit and asset inventory of UEDC completed. Performance evaluation system implemented; billing system software developed and implemented; metering system improved; and communications plan implemented. PA staff worked on preparation for commercial sale of UEDC.

Task 4: A total of 19 projects were developed in three target communities, resulting in \$72,000 in loan funding and \$250,000 in grants being administered. A training manual was developed monitoring organizations were trained. The guarantee fund was supposed to run until 2011, but starting in 2006 several borrowers had trouble with repayments and the fund was closed by USAID.

Task 5: Construction of energy intervention sub-projects. Kekhijvari gas, Spasovka hydro and Likhauri gas were completed in July and Sept. 2006. Kekhijvari hydro was not pursued per CTO instructions.

1.5.5 2007 Final Project Year (Project Year 5)

Task 2: Power restored to 24 hrs/day; collection was 90%, at 19 million Georgian lari per month. UEDC was sold for \$132 million, with a further \$300 million investment commitment from buyer.

Task 5: The pilot community development project was intended to develop replicable energy alternatives and natural resource management practices to relieve the pressure on forestry for fuel wood and help sustainable economic growth.

1.6 Financing

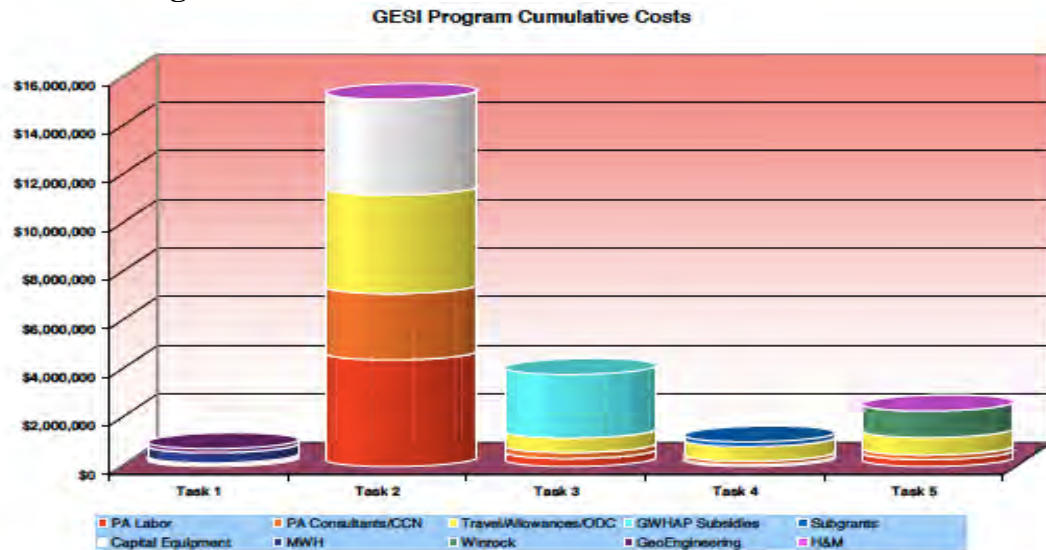


Figure 1: GESI Program, Cumulative Direct Costs, by Component¹⁰

¹⁰ Figure # 1 from PA Final report, dated July 16, 2008, p. A – 1.

The GESI project cost approximately \$33 million dollars. The direct costs per Task or Component are shown on Figure 1, above. The direct costs account for approximately 69% of total costs. Indirect costs count for the balance. Table 1, (below) shows approximate direct costs per component, and the percentage they represent among the five components of the project. If total costs (including direct and indirect costs) were allocated against each component, then Component totals would be approximately 30 % higher than the direct costs shown in Figure 2.

Component # 1	Component # 2	Component # 3	Component # 4	Component # 5
<\$ 1 mil	+/- \$14.5 mil	+/- \$ 3 mil	\$950,000	+/- \$4 mil
< 3%	44%	9%	<3%	+/- 12%

Figure 2: Direct Costs and Percentages of Total Budget, by Component

2 FINDINGS & CONCLUSIONS BY PROJECT COMPONENT

2.1 Component # 1: Hydropower restoration

2.1.1 Key Questions

In terms of leveraging funds for power restoration:

- What was the impact of “quick hits” studies produced under the Program?
- Were investments for hydropower restoration leveraged by these studies?
- If not, why were these studies not effective?

2.1.2 Overview & Objectives

For USAID and therefore for GESI, the initial focus of increasing energy supply involved the restoration of hydropower. This work was expected to have had two main sub-components:

1. **Rehabilitation:** USAID intended to completely rehabilitate at least one major hydropower plant with a capacity of between 5 and 20 MW to add generation capacity to the country’s energy grid; and
2. **Capital Maintenance:** In addition to rehabilitation USAID intended to carry out critical capital maintenance activities on several state-owned hydropower facilities to bring approximately 100 – 130 MW of additional capacity on line immediately to meet the GWHAP requirements.

Specifically, the Contractor was expected to:

- Examine the policy, regulatory, institutional, financial and legislative environments governing activities in the Georgia power development, transmission, dispatch and distribution sectors;

- Suggest criteria for site selection that would take into consideration rehabilitation opportunities...that would offer the least cost for generation and distribution;
- Complete site visits, as appropriate, and prepare an appraisal report that would recommend one or more plants...; [and]
- Provide sufficient information in an appraisal report for USAID to make a decision to proceed with design and construction.

The GESI project contract was signed on 26 March, 2003. Work began almost immediately on Component # 1. This work was prematurely terminated on October 1, 2003 by mutual agreement between USAID and PA Consulting¹¹.

2.1.3 Evaluation Methodology

Component # 1 ceased after six months, and all project activities on Component # 1 ended nearly seven years ago. The data trail is quite cold. Potential interviewees wither were not to be found, or could not remember the short, operational period of this component. Team A interviewed those informants it could find (see Appendix 4), reviewed available documents, and interviewed other relevant donors like the World Bank and spokesmen for major contractors like Siemens.¹²

By the end of April, 2003, GESI Project staff had identified four potential hydroelectric power stations, including two specific dams, as immediate priority targets. PA Consulting prepared schedules and some construction details for the rehabilitation of these dams, Gumati I and II. The GESI evaluation team visited Gumati I and II, the first two hydro stations that were proposed for immediate rehabilitation, and interviewed the hydro station operators at each dam.¹³ Sometime after PA Consulting ceased work, these power facilities were subsequently rehabilitated by KfW with Siemens equipment. The GESI evaluation team's Team A interviewed representatives from Siemens, as well as the World Bank, but was not able to meet with representatives of KfW.

For purposes of analysis and comparison with larger Quick Hit efforts, Team A also visited one mini-hydro station, Kakharet Hydro, previously rehabilitated with cost sharing and technical assistance from a USAID funded rural energy program. This USAID rehabilitation work was not done under GESI.

2.1.4 Major Findings

PA Consulting had prepared detailed implementation time schedules and cost estimates for four proposed sites.

¹¹ See press release in the Annex 9.

¹² Siemens was the contractor who eventually implemented the rehabilitation of HPP at Gumati I and II.

¹³ See Appendix 4

At the time Team A visited Gumati I and II, both dams were spilling water; all turbines were functioning,¹⁴ and the turbines had been repaired. Hydro station operators reported that one turbine generator had been replaced with new Siemens equipment and was generating 2 MW of additional power output, following the full replacement. KfW had also installed new Siemens metering equipment at the dam, and had computerized the operating and monitoring systems at Gumati I.

The hydro station operators, who had worked for many years at the dams managing the electricity output, did not remember PA Consulting staff ever visiting their stations. They confirmed that in 2003, the dams had been shut down for part of almost every day because of technical problems, and that it had been difficult to supply power to the grid.

The micro-hydro station visited by Team A for purposes of comparison (rehabilitated and restored with grant money and technical assistance from USAID) was also in place, functioning, and reportedly delivering two megawatts of power into the grid. Even in winter time, when water levels are low, the micro-hydro station was delivering 0.3 MW of power.

2.1.5 Conclusions

By the summer of 2010, both Gumati I and II and their associated power-generating equipment and meters are working well and have been substantially upgraded. In Gumati I, the most damaged Number Three Turbine Unit had been replaced with a unit of higher efficiency, generating a slightly higher output. The new turbine also added two MW to the dam's overall power capacity, so it now produces 42 MW. Gumati II now produces 21 MW. The evaluation team did not meet with or evaluate the work of KfW, and has no data or judgments on why, at some time after 2003, KfW was successfully able to rehabilitate Gumati I and II. The digital operating panel suggests implementation around 2006/7 when similar Siemens equipment was installed in all power stations.

In the summer of 2003, as PA and USAID learned more about the implications of the rehabilitation process, they discovered four reasons to move away from carrying out the work of this component at that time:

1. Serious progress with rehabilitation would have taken a relatively long time.¹⁵;
2. The cost of rehabilitating hydropower stations was overshadowed by the GoG's intent to privatize many stations, which would eliminate the need for USAID-funded hydropower rehabilitation;
3. Corruption in the energy sector meant that investments to increase hydropower generation might not yield net improvements in electricity distribution; and
4. The inability to control any power generated by the improved hydro stations would make it difficult to collect revenues for the energy that was delivered¹⁶, and would

¹⁴ This included three turbines at Gumati I, and two (2) at Gumati II. Gumati I was designed to produce a total of 42 MW. Gumati II produced 20 MW.

¹⁵ PA initially expected "Quick Hit" improvements for the Gumati I and II hydro-stations to be completed in less than two years. Later analyses showed rehabilitation lasting until the 1st Q of 2007, thus extending over approximately four years. [From Spring 2003 to Spring 2007.]

render the concept of improving the management of public power utilities impractical.

The mission learned from USAID that the hydropower component was cancelled by the budget coordinator from Washington DC¹⁷, and the money would be diverted to Component # 2. In doing so, USAID shifted its emphasis from working to improve supply-side to working to improve the demand-side of the power system. The team did not assess reasons for the apparently successful rehabilitation of hydropower, after the distribution had improved, by Siemens with KfW funding. Speculation surmises that the rehabilitation was undertaken after successful reforms of the distribution systems from 2004 through 2006, and after a functional change in the larger “enabling environment” of Georgia. This success at a later date validate the correctness of the initial USAID approach by successfully restoring the same sites selected by USAID.

2.2 Component # 2: Electricity Distribution Sector Reform

2.1.6 Key Questions

What did the United Energy Distribution Company (UEDC) do regarding:

1. Metering, billing, and collection

- What was the impact of improved metering, billing and collection?
- Does it continue? Has it changed? Why and to what effect?

2. Personnel capacity building:

- What was the impact of downsizing UEDC staff on overall company performance and efficiency?
- Has the human capacity of the UEDC personnel increased as a result of the human resources reforms conducted by the management contractor? To what degree has personnel of the UEDC assimilated new management tools/techniques provided and developed by PA under the Program? How have they used them?
- What was overall impact of the reform strategy implemented by PA on UEDC performance? What changes have been forthcoming?

3. Public relations, awareness, and participation

- What was the impact of the information/communication campaign which targeted media and the general public?
- Did this campaign contribute to better understanding of energy issues by the public and did it increase support to the UEDC management contractor efforts to reform and rebuild the power distribution sector? If not, why?
- What was the impact of this campaign on public to support communal re-metering?

¹⁶ Hydropower stations typically do not serve the surrounding areas, but are coupled to the national high voltage grid.

¹⁷ See the press release in the annex 9.

4. *Re-metering (wholesale and households)*

- What was the impact of improvements in UEDC (e.g. increased collection rate, reduced losses, etc) on Georgia power sector and attraction of private ownership in the sector? If there was little or no impact what was missing to make it more effective?

5. *and...*

- *What was the impact of UEDC management contractor on reflecting actual costs in electricity tariffs on retail levels outside Tbilisi?*

2.1.7 Overview & Objectives

In addition to hydro rehabilitation, the GESI project was expected to upgrade one or more distribution networks that could transmit the newly restored power supply. One objective of integrating the proposed supply and demand sides was to demonstrate that when reliable power was provided, where metering was transparent and payments received at a central payment office, citizens would pay for their electric service in a timely manner. For these reasons, USAID deemed it necessary to prove that a well-managed distribution system in Georgia could be made financially viable. To verify this, one or more distribution service areas were to be upgraded and provided 24-hour power delivery to all users of those defined service areas. The service areas that formed a part of this proposed project were to be upgraded and fully metered. An adequate billing and collection system was to be installed, staff trained, and technical assistance provided. The Contractor was specifically instructed to:

- Define a distribution service area adjacent to the rehabilitated hydropower plant, located in an area where the desire for power was one of the top community priorities;
- Meter every consumer; and
- Collect cash for energy used to confirm financial viability.

The Contractor was also asked to present a plan to USAID for subcontracting management and operations of the distribution-operating unit, including a billing and collection methodology.

2.1.8 Evaluation Methodologies

Team A, one electrical engineer and one public policy analyst, carried out background studies and analyses of reports and work plans prepared by PA, and drafted a work plan for this evaluation. Then they began interviews in Tbilisi. During the course of the evaluation, Team A:

- Met with representatives of four public power utilities: UEDC, Telasi; Energo-Pro, and GSE. Many of the staff working with Energo-Pro during the course of the evaluation had previously worked with UEDC when it was under the GESI project. These interviews provided continuity and gave the team a valuable opportunity to look back in time, to UEDC's era under PA Consulting management.

- Met with energy producers, distributors, and consumers, traveling more than 1200 km as part of its field analysis in Georgia. They visited three regions, four municipalities, and seven regional or branch business service offices of Energo-Pro,¹⁸ meeting with staff and management-level professionals. They visited three individual dispatch stations¹⁹ and assessed three hydro stations, including two that were planned for Component # 1 rehabilitation work. They also visited one mini-hydro station been refurbished by USAID under a separate project.
- The team also met with donors from the World Bank and with an expert from Georgian State Electrosystem²⁰ (GSE), who in turn supervised the work of Voight-Siemens, renovating two major Georgian hydropower stations. They met with energy regulators (SEMEK), representatives of the NGO community (Winrock, CENN, PSI), and beneficiaries represented by energy sector consumer associations (ESCAs). They also met with business associations and government policy-makers.
- Due to the long time passed since the end of the project the team had very limited interviews with senior PA staff in Georgia. As a result the team had to rely on the extensive written documentation provided by USAID.

2.1.9 Major Findings

Background

Through the 1980s, Georgia had had a functioning power distribution and metering system, which began to break down in the early 1990s. During the Soviet era, people often didn't pay for the electric charges. Sometimes they were exempt; sometimes the organization for which they worked paid for power. One person interviewed said that in Soviet times there was simply a flat fee for power. Another person said that there had been no individual meters, simply a flat fee for connections.

The power generation and distribution system began to break down in the early 1990s. As the supply of power began to break down, the payment system also began to break down, starting circa 1990–1991. AES/Telasi reportedly began renovating and improving the distribution systems sometime around the year 2000. Although AES, an experienced international power company withdrew from Georgia in the summer of 2003, selling out to RAO from Russia, Telasi had implemented computerized billing for services by 2003.

¹⁸ Energo-Pro bought UEDC in 2007 and took over day-to-day management of the power utility that PA Consulting had managed. UEDC's distribution network included most of the power distribution system outside of Tbilisi.

¹⁹ Two small distribution stations at 110 KV, and one main switching station 500 KV./ 220 kV /110 kV

²⁰ GSE is responsible for all hi-tension power dispatch work across Georgia, including power imports and exports.

Telasi, which only supplies power to Tbilisi, now has 420,000 customers, or about 30% of the national total. UEDC and its successor, Energo-Pro, supply all customers outside of Tbilisi with power, approximately 70 % of the national total. UDC in the beginning was formed by combining all rural distribution companies outside Tbilisi. It was insolvent company which could not get operating credits, so it needed a cash infusion for its daily operations²¹.

The World Bank and the USAID reported that at the time of the start of the project there was extensive and effective donor coordination, with the participation of PA consulting. Reform of the energy sector was a key condition for IMF support²².

2.1.9.1 Metering, billing, and collection

- Georgia is still in the process of replacing communal metering with individual metering. Virtually all staff with knowledge of Component # 2 said that communal metering was simply a temporary, short-term measure, necessary to the success of increased payments. With limited resources, UEDC could not install individual meters. Interviewees reported that communal metering was simply the best solution at that time.
- UEDC put all customers on meters and began the process of rationalizing the grid, organizing communal meters by community. They also began reorganizing the grid and replacing wires with cables to help reduce theft and corruption.
- Even today, Energo-Pro in the Kutaisi region reports that only 60% of its customers are individually metered. Energo-Pro's medium-term goal now is to individually meter the majority of their customers over the next three to five years.
- Two smaller offices of Energo-Pro reported somewhat lower percentages of individual metering than Kutaisi.
- Collection efficiency at UEDC improved considerably from 20%-30% at the beginning of 2005 to close to 95% towards the end of PA's mandate in 2006. No data were available to demonstrate the direct influence of GWHAP, but data indicate the positive effect of the GWHAP program on collection efficiency in Telasi, which helped them to keep the losses low in the years before 2005.

2.1.9.2 Personnel, Capacity Building, Training, Organizational Development

- Most staff who previously worked for UEDC continue to work for Energo-Pro today.
- Approximately 15 professional staff from UEDC now working for Energo-Pro said UEDC reduced the number of employees by approximately 50% per field office when

²¹ See press release ANNEX 11.

²² Georgia and the IMF: <https://www.imf.org/external/np/loi/2004/geo/01/index.htm>

it assumed management of the utility. They confirmed that salaries had been increased from just a nominal payment to what they all now regarded as ‘reasonable’ levels. One officer of Energo-Pro said the company had continued with further staff reductions, going beyond those instituted by UEDC/PA.

- Approximately 15 staff member interviewed at Energo Pro confirmed that they had received repeated training, and that most of this training began when PA Consulting managed UEDC.
- Most Energo-Pro staff previously with UEDC said that most billing, collections, computerization and management systems being used by Energo-Pro today had initially been introduced by UEDC.
- Prior to PA Consulting taking over management of UEDC, key informants universally reported that attendance was casual, and staff was not focused on their work. Employees who were kept on by PA Consulting and who now worked with Energo-Pro described a significant change in corporate culture in terms of attendance and attitude towards their job. Many employees of Energo-Pro stressed that they were now essentially driven by the “bottom line.” They knew that customers had to pay their bills for the utility to function and operate as a viable corporation.

2.1.9.3 Public relations and outreach

- All respondents knowledgeable about Component # 2 activities reported that 2003 and 2004 were the worst years for public relations and community outreach. However, within a few months of the project’s beginning, virtually every business service branch of UEDC had established a public information office, or designated one staff person to be responsible for public relations and outreach. Some respondents mentioned a hot line for registering complaints. In the early days of UEDC, one key informant said that customer complaints had usually gone to technical staff, who didn’t have time or expertise to respond to such complaints.
- In 2003 and 2004, when PA Consulting first assumed responsibilities for managing UEDC, many people interviewed described periods when employees were harassed by angry customers. They emphasized today that harassment was negligible and complaints were dramatically reduced. One respondent said that currently, the number of complaints on the hotline was at most only a handful per month.

2.1.9.4 Overall impact of PA Consulting/UEDC management on actual costs of electricity at retail levels

- Rates that UEDC and other public utilities can charge for electricity are fixed by the regulatory agency SEMEK, at the GESI time known as GNERC (Georgia National Energy Regulatory Commission), or later GNEWRC (including Water).

- The Telasi tariff on electric power provided to Tbilisi is slightly higher than the tariff rate charged by either UEDC or Energo Pro for customers outside the national capital. Total losses for Telasi (including both commercial and technical) have been reduced from 40% in 2005 to 18% in 2009 (see blue line on graph, below). In 2003, UEDC collected only 20% of their production, while almost 80% was lost. By 2007, PA consulting had reduced total losses to 25% .

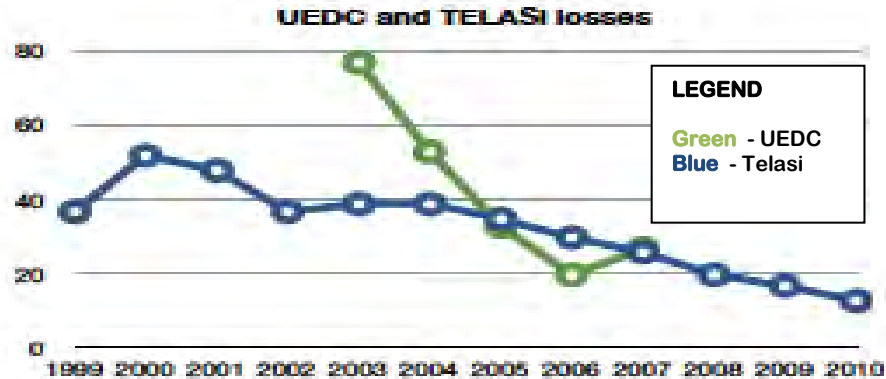


Figure 3: UEDC and Telasi losses.

2.1.10 Conclusions

PA Consulting, like AES Telasi, brought generic “off the shelf” public utility management systems to Georgia. While Telasi is serving the urban Tbilisi area, the U(E)DC serves the rural areas with 2/3 of the customers, which made the process much more challenging. Once PA Consulting moved beyond Component # 1, and began working on Component # 2, they were primarily addressing utility management improvements. PA used a systems approach to address management issues in order to improve cash flow for the organization. PA consulting and USAID jointly won the top award for consulting in the UK for this project²³

The GWHAP helped in significant ways to allow PA consulting and UEDC to proceed with introducing improved management systems into UEDC. GWHAP provided an important cash infusion to the operations of UEDC, as it had done previously to Telasi.

PA Consulting made an effective start in changing the corporate culture of UEDC. PA introduced a concept of continuous staff training and management development that was totally new at the time. Energo-Pro continues to build on this corporate foundation today.

PA and UEDC laid the groundwork for comprehensive metering system, but made only partial progress towards that long-term goal. Energo-Pro continues with this important work today, using many of the same staff previously employed by UEDC. Energo-Pro

²³ Press release in ANNEX 10, Energy Overhaul wins Top Award.

also uses many of the same systems—essentially “standard operating procedures” for power utility operations, at least in the West and in developed countries.

PA Consulting helped the country move towards collecting actual costs for electricity at the retail level. They encouraged an understanding of the need for and legitimacy of these costs, and they met the customers’ demands for power, legitimizing the billing. They were helped in this process by the companion GWHAP program, described in the next section of this evaluation.

In conclusion, the GESI Project demonstrated that shifting the GESI program emphasis from the supply side to the demand side, and much of the proposed funding from Component # 1 to Component # 2, was a good and effective decision. At the same time, for PA Consulting to assume direct responsibility for running UEDC was a potentially risky decision for the U.S. Government. In the end, the successful privatization of UEDC for a significant amount as a result of PA’s and USAID work must have felt like a crown on the GESI project.

2.3 Component # 3: Georgia Winter Heat Assistance Program (GHWAP)

2.3.1 Key Questions

1. *What was the overall impact of GWHAP activities implemented under the program on power sector performance?*
2. *How did the GWHAP program support the privatization process and energy sector reform?*
3. *How effective was the program in ensuring that the most vulnerable households had access to electricity during the winter months?*
4. *Did the program’s provision of enhanced cash flows to the electric distribution companies (LDCs) support their efforts to increase collections and improve operations? Did it have significant impact on electricity distribution companies’ performance?*
5. *How effectively were the database and methodologies developed by PA for GWHAP used by the GOG to deliver assistance to vulnerable populations?*
6. *Was the capacity of the Ministry of Labor, Health and Social Affairs to implement subsidy programs increased as a result of GESI’s capacity building interventions?*

2.3.2 Overview & Objectives

Starting in 1999 and extending through the winter of 2002/03, USAID provided substantial subsidies to cover the winter heating costs of the most vulnerable of the Georgian population prior to the beginning of the GESI project. PA Consulting Group managed GWHAP 3 and 4 in the years 2001 and 2002. Upon the completion of GWHAP V in May of 2003, further on-going GWHAP activities became part of the GESI Project.

In 2003, USAID thought it was essential to GESI’s success that vulnerable groups in Georgia should not bear the brunt of privatization, as electricity distribution enterprises were privatized and collection of electric bills and cut-off for non-payment were

reinforced. GWHAP was designed to relieve this burden by providing vital assistance to vulnerable groups and certain institutions like hospitals, old-person's homes, orphanages, retirees and IDPs, while people made the transition from "free" government-provided electricity to cost-based electricity provided through private industry. USAID also hoped that GWHAP would provide cash flow to utility companies giving them time to improve utility operations, at the same time that they increased collections from customers. In the meantime, Government was expected to develop alternative means to protect vulnerable groups. This was the linkage between Components # 2 and # 3.

There was also a clear linkage in the eyes of the Project designers between Component 1 and 3, because USAID intended to finance the immediate restoration of hydropower capacity (Component 1, above) and deliver equivalent power to beneficiaries in-kind. USAID anticipated that enough power would be delivered to a distribution company that it could be "monetized" and allow utilities to recover the actual costs for distribution from the selected beneficiaries.

According to its contract, the Contractor's specific responsibilities were to include:

- Review the history and operating procedure of GWHAP and recommend changes;
- Put in place new procedures, including training personnel;
- Establish an operations plan to assure efficient implementation;
- Establish a monitoring plan;
- Develop a set of detailed records of electricity consumption by beneficiaries; and
- Study innovative techniques that could provide protection to the vulnerable.
- Further, the Contractor was required to re-design the GESI program so the database could automatically be updated.

2.3.3 Evaluation Methodologies

The Team reviewed relevant documents including reports and the Annual Workplans and interviewed key informants and operating officers at Telasi, Energo-Pro, and former staff of UEDC, and assorted NGOs. Most informants did not remember the details of the voucher program that commenced 12 years ago and ended more than five years ago in the Spring of 2005. Interviews were also conducted with some beneficiaries and former staff of the Ministry of Health and Social Protection.

2.3.4 Findings

AES Telasi was the first public utility to benefit from GWHAP, starting in 1999.

At least two-thirds, and usually more, of the program's annual budget were used to help beneficiaries in Tbilisi.²⁴ However, support to Tbilisi declined over time, and GWHAP

²⁴ "Between January 1999 and March, 2004, USAID invested nearly \$40 mil in GWHAP. [Only the last two winters of this program of this were under GESI, including the winter of 2003/04, and winter 04/05.] Of this

redirected its assistance towards the regions, particularly in the last two years of the component's activities in 2004 and 2005.

Most of Tbilisi knew about the USAID voucher program. One key informant reported that approximately 90,000 customers were direct beneficiaries of GWHAP, mostly in Tbilisi. Statements found elsewhere suggest that 15–20% of the population of Georgia were beneficiaries.²⁵

Targeting for beneficiaries was primarily based on a database initially developed under GHWAP 1 and 2, beginning in 1999, when Counterpart International was responsible for the Program. No major new funds were made available to develop a new database after GHWAP 1 and 2, although under GESI, the GWHAP component continued to revise and update the database using their monitors, who delivered the USAID vouchers to individual homes.

The value of the GWHAP voucher varied year by year, depending on the availability of funding, from a low of 150 kilowatt hours per month to a high of 250 kwh per month in Tbilisi. The value was lower outside of Tbilisi.

GWHAP was closely linked to Component # 2 (Electricity distribution reform). As such, it was one part of a larger change dynamic that USAID, other donors and the Government of Georgia were putting into place.

2.3.5 Conclusions

The overall impact of GWHAP activity implemented under the Program on power sector performance was generally positive. GWHAP had significant short-term impact at a most critical time for Georgia. It helped a significant number of poor people, particularly in Tbilisi—and sometimes saved their lives, as several beneficiaries or key informants reported.

GWHAP needs to be viewed as part of a larger reform dynamic in the Georgian energy sector that directly related to Component # 2 as well as connecting to other donors and the Government's efforts to reform the energy sector. While help to the vulnerable was an important objective, the GESI Project was also leveraging this support to help public utilities increase their revenue collection rates. The GWHAP program clearly supported privatization and energy sector reform by subsidizing many of the Georgia's vulnerable groups, particularly in Tbilisi and in regions outside of Tbilisi in the last two years of the program. This clearly helped to reduce public backlash by providing a social safety net

total, nearly \$30 mil was spent in Tbilisi. In every program year but two (1999-2000, and 2003-2004) at least two-thirds, and usually more, of the program's budget was used to help beneficiaries in Tbilisi." USAID, *Impact Evaluation of Georgia Winter Heating Assistance Program*, (Market Analytics Team, PA Consulting), January 18, 2005, p. 2-2.

²⁵ The 90,000 beneficiaries appear to have been primarily Tbilisi residents. Presumably the larger number (15–20%) included Georgians around the country. It's also possible that the informant who gave the figure 90,000 simply understated or mis-remembered the total number of beneficiaries.

for the most vulnerable households of Georgia, beneficiaries and others involved with this component reported to the team.

The project ensured that the most vulnerable households had access to electricity during the winter months, albeit mostly in Tbilisi. At least two-thirds, and usually more, of the program's annual budget were used to help beneficiaries in Tbilisi.

The program was successful in providing enhanced cash flows to the electric distribution companies to support their efforts to increase collections and improve operations. This program had significant impact on electricity distribution companies' performance by increasing their positive cash flows.

The impact of GWHAP methodologies on GoG's assistance programs after the completion of the program was essentially negligible. The database and methodologies developed by PA for GWHAP were not used to any significant degree by the GoG to provide assistance to vulnerable populations because the new Government made a decision to use their own criteria and methodologies. This was confirmed in a meeting with the former Deputy Minister of Health, Labor and Social Protection. The team has no accurate data as to why this was done. To this day, the Ministry's database includes pensioners, veterans, former teachers, and all users of the Social Insurance Fund and Pension Fund. The steady improvement of the government pensions and GOG safety net allowed USAID to close the GWHAP program.

The capacity of the Ministry of Labor, Health and Social Protection to implement subsidy programs did not significantly increase as a result of the Program's capacity-building interventions, in part because the Ministry declined to use the methodologies that had been developed under GESI and precursor GWHAP programs. The database was never even formally accepted by the Ministry and remained with GESI and PA Consulting.

The Evaluation Team also reviewed the impact Evaluation of GESI's winter heating assistance program prepared in January, 2005 by PA consulting and found them to be credible and reasonable. A brief summary of these conclusions are given in Appendix 6.

2.4 Component # 4: Credit Facility

2.4.1 Key Questions

- *How effective was the credit facility developed under the Program?*
- *By increasing access to credit facilities, what was the project's impact on improving energy supply and energy efficiency?*

2.4.2 Overview & Objectives

According to the PA Contract, ("Section C"), the purpose of the credit facility task was to help support private sector development of projects and resources that would contribute

to cleaner and / or more efficient energy supply and use in Georgia.²⁶ In September, 2003 a team designed a credit facility that would promote projects capable of supporting income generation activities. The “Credit Facility Design Report” proposed three major components:

- **Establish a pilot Development Credit Authority (DCA) program:** the Contractor should assist USAID with a pilot Development Credit Authority (DCA) guarantee program for Georgia. The DCA Program would cover up to 50% of aggregate principal disbursed for loans or bonds issued by partner banks.²⁷
- **Create a cash-secured Concessional Loan Fund:** The loan fund should provide medium to long-term loans, and be intermediated by a partner financial institution. A majority of the loan amounts would be used for rural energy generation or distribution projects.
- **Design and Implement a GESI-administered Grants Program:** These funds would be used to subsidize high risk energy projects supported with concessional loan funding from the Guarantee Fund.

Under Component # 4, the contract’s specific tasks included:

- Accessing the possibilities of establishing a credit program in Georgia;
- Identifying types of facilities that appeared potentially viable;
- Identifying sources of capital for infusion into the program; and
- Presenting a program in sufficient detail for USAID to make a decision whether to proceed with the component.

2.4.3 Evaluation Methodology

The evaluation methodology used for Component # 4 and Component # 5 were similar. Team B analyzed both components as part of their travels around the country. The team met with about 40 beneficiaries who received assistance from both Components 4 & 5. These beneficiaries described the assistance they had received from both components.

²⁶ Examples were to include, among others: (1) renewable resource development (e.g., mini / small hydropower, solar power, wind generation, biomass, biogas); (2) energy efficiency projects (e.g., industrial process improvements, lighting efficiency, fuel substitution); (3) rehabilitation of small / mid-size energy facilities; (4) expansion of utility networks where such expansion will yield clear economic and environmental benefits (e.g., expanding gas supply to a settlement); (5) utility infrastructure improvements (e.g., metering equipment); and (6) the development of income generation projects that increase the capacity of energy users to pay for utility supplies.

²⁷ An initial estimate indicated that approximately \$150,000 (of Mission funds) would be needed to cover the subsidy costs to support loan / bond guarantees totaling up to \$1.5 million that, in turn, would cover aggregate disbursement or issuance of loans totaling approximately \$3.0 million.

Under GESI, 21 sub-projects in the form of loans were funded under Component # 4. Team B collected information about nine projects, and formally interviewed the owners of seven projects. For the other two sub-project beneficiaries, they received 2nd party reports from others in the community. They reviewed nine out of 21 sub-projects²⁸, essentially assessing 43% of the total.

In total, Team B interviewed 21 individuals who were familiar with elements of Component # 4, including approximately 14 direct beneficiaries. The team met community leaders, loan applicants, individuals who had not applied for loans, and secondary beneficiaries or people who were living in the community but not directly connected with any individual sub-project.

Sometimes multiple interviews or follow-up telephone conversations were conducted to answer additional questions or clarify technical details. Additional meetings were sometimes held with applicants in Tbilisi after the initial interview to explore further implications.

2.4.4 Findings

The Credit Facility was designed to have three principle components:

- a Development Credit Authority (DCA) to support \$3 million in credit-worthy loans;
- a Loan Guarantee Fund of \$600,000 for less credit worthy projects, and a grants program; and
- Training programs in business practices, accounting, and loan appraisal techniques.

Development Credit Authority (DCA): By September, 2004, the DCA was ready for implementation. An agreement had been signed between USAID and the Bank of Georgia (BoG), allowing \$3 million in DCA-backed corporate bonds to be issued by BoG. The legal work was largely complete, including a preliminary prospectus. Issuing the first tranche of bonds was scheduled for March 2005 but was postponed until July at the request of BoG. Later, again at the request of BoG, these bonds were never issued.

A Loan Guarantee Fund was created with a \$600,000 cash deposit to BoG. This would guarantee 80% of the loans made to twenty-one borrowers under this program, at a total value of \$535,795 (Appendix 6 shows this list of loans). Five loans out of 21 were for energy supply sub-projects.²⁹ Team B evaluated two of these loan funded sub-projects: Kekhijvari Natural Gas Pipeline Extension³⁰, Likhuri Natural Gas Pipeline Extension.

²⁸ For a complete list of the 21 sub-projects, see Appendix 6.

²⁹ Of the remaining sixteen secondary or companion energy demand projects, Team B evaluated six. All six were working at the time of the Evaluation Team's site visit in the summer of 2010.

³⁰ Kekhijvari Natural Gas Pipeline Extension actually received two loans, plus an additional grant from Component # 5 of \$60,000. Other costs associated with this project included \$50,000 of estimated community contributions.

After two years, USAID terminated the Loan Guarantee Fund, although termination was not allowed under the agreement with BoG. To pay off seven projects that BoG could not assume without the loan guarantee program, a settlement was reached where USAID provided grants totaling \$147,038. On October 12, 2007, the remaining funds were returned to PA.

Grants were provided to projects that were not commercially viable, in order to support projects that also received Loan Guarantee Fund financing as settlement for the early termination of the Loan Guarantee Fund. These grants totaled \$262,000, and were in addition to the Loan Guarantee Funds. The GESI Project also provided matching funds. The GESI Project made grants totaling \$147,038 to pay off loans that BoG would not accept when the Guarantee Fund was terminated early.

Component # 4 provided **training** to 18 community-based organization (CBO) members and 12 bankers. Training was conducted twice in three-day sessions over the period of one year. Four trainees were interviewed; all said the training was good. A better measure of the quality of training was the grasp of business practices exhibited by many in these interviewees. Seven were still active in developing new projects for investment or making plans to expand their existing operations.³¹

2.4.5 Conclusions

The Credit Facility had little impact on improving energy supply and no impact on energy efficiency. GESI developed no lasting Credit Facility. The DCA facility was the only proposed long-term credit component in the program; if it had been successful, anecdotal evidence indicates it might have funded useful energy projects, but probably not the specific projects developed through the business plans prepared under Component # 5.

The proposed Credit Facility was never completely developed and the \$3 million dollars in bonds under the DCA program were never issued. Projects “in the pipeline” for funding under the DCA program were larger, urban, and more industrial, with a stronger energy efficiency component compared to the sub-projects that were prepared for Component # 5. However, dropping the DCA bonds initiative gutted the Credit Facility of its only long term financing vehicle, and these projects could not be financed.

In September, 2005 BoG issued 1,500,000 Georgian Lari’s GEL in bonds. The team’s evaluation suggests that Component # 4 may have helped lay the groundwork for these bonds, but these bonds generally appear to be unrelated to GESI. On balance, the DCA

³¹ The training given to bankers was to help them understand the utility of making loans for energy efficiency and renewable energy projects. This training also was conducted in two sessions over a year. Three participants were interviewed. Two could remember taking the course six years ago, but had only a vague recollection of its content. They remembered that it was relevant to the work they were doing at the time. A third banker interviewed recalled the basic content of the course but left banking shortly after taking the course. He has just returned to banking.

Credit Facility could not serve as a source of funding for small rural projects developed under Component # 5 because it was designed to serve another purpose.

The Loan Guarantee Program was designed to last seven years, to serve as demonstration projects in selected communities. However, after two years it was terminated by USAID for unknown reasons³², so it had limited impact. USAID later informed the mission that this early pilot project enabled USAID to set-up credit facilities and DCA guarantees, based on the experience of the initial pilot approach.

Grants were made in association with sub-projects funded under the Loan Guarantee Program to allow such sub-projects to meet minimum credit standards and as a settlement with BoG when the Loan Guarantee Program was terminated early. Since the Loan Guarantee Program was aimed at projects that were not commercially viable, these grants served to lower the loans required to levels acceptable to the CBOs responsible for the projects.

Training was a marginally bright spot in the Credit Facility task. The training that was given to bankers met a need at that time. Credit training given to the CBO leaders also had a lasting impact. Six or seven persons interviewed demonstrated a strong comprehension of business operations.³³ Some are using their training to write new business plans to expand their business or to start other businesses.

The two energy supply projects funded under the loan guarantee program—the Kekhijvari and Likhauri gas pipeline projects—that the team evaluated were marginally successful. Team B confirmed that these two communities now have some additional natural gas infrastructure in place that will continue to provide some benefits to local people, and might become commercially viable if more households and commercial customers are connected.

On balance, Small and Medium Enterprise (SME) Projects are not generally effectively organized around the issue of energy. Energy issues by themselves are not sufficiently important and do not represent a useful principle for organizing most SME projects. SME efforts should be driven primary by economic concerns, with energy-related issues being only a secondary or tertiary priority. The credit facility program was not effective because most of it was not implemented. For this reason, the impact of the credit facility that the GESI program developed was minimal. There is no meaningful, ongoing capacity generated because the one component with long-term potential (DCA) never materialized. The missing component that might have made this credit facility successful was a loan program aimed at small scale rural projects.³⁴

³² The Evaluation Team was unable to find a reason, just the fact that USAID had terminated it.

³³ Elene Kharabadze, who taught an accounting course to the business trainees, said she tested the students at the start of the course and received the relatively low scores that were expected given the trainees' rural backgrounds. However, a final exam showed they had all achieved a satisfactory level of comprehension.

³⁴ One member of the GESI Evaluation Team asserted that this need was eventually met by the REED Project, which was not assessed or evaluated by the Evaluation Team.

2.5 Component # 5: Community Development

2.5.1 Key Questions

- 1. What was the impact of GESI's community development efforts to address energy issues at the community level through energy production and/or energy conservation and efficiency activities?*
- 2. How effectively did GESI facilitate access to financial, technical, social and energy information resources, to help communities achieve economic development and energy independence?*
- 3. What was GESI's impact on addressing social problems with economically and environmentally sustainable solutions that could generate (i) employment opportunities, (ii) increased income potential for rural populations in target communities and/or (iii) reduce their over dependence on wood cutting by developing alternative indigenous renewable energy sources?*

2.5.2 Overview & Objectives

By early 2003, much of Georgia was suffering from a prolonged economic crisis, a breakdown of grid-based energy services due to non-payment and corruption, and the upward movement of energy prices towards market levels as part of energy sector reform. The result was that traditional heating fuels in towns and cities had become unavailable or unaffordable for a significant proportion of the Georgian population. The lack of traditional heating fuel resulted in an increased demand for illegal wood harvesting to meet heating demands. Severe degradation of forest resources was reportedly occurring at an alarming rate.

To address these issues, the contractor was instructed to design a community-based, pilot assistance program to work with one or more selected communities. The program should identify communities based on a variety of energy problems, and should be geographically or topographically dissimilar. Criteria for selection should be based on how well the community's problems could be identified, and the impact it would have on endangered biomass resources.³⁵ Key points to address in this component included:

- Community alternate energy activities
- Development of alternatives to wood heat; and
- Community environmental activities relating to energy.

2.5.3 Evaluation Methodologies

³⁵ Other criteria included whether the community was heavily reliant on wood for heating and cooking, whether it was an agricultural or remote forest community, and whether it had access to sustainably produced biomass. Another parameter for selection was community participation.

The members of GESI Team B traveled more than 1,300 km and conducted interviews together while evaluating both Components # 4 and # 5. Total activities included approximately 114 sub-projects or business plans. Team B visited 50 potential business plans, and/or sub-projects, located in four of the ten communities or villages, in three regions of Georgia. The sample frame that Team B examined represented approximately 44% of the total business plans/subprojects [50/114] that were developed under Component # 5. Of the 50 business plans, 19 were functioning businesses, six had been functioning but had ceased, and 25 had never functioned.

Approximately four years after approval or sub-project start up, Team B physically visited and assessed 44% of the total business plans that had been prepared and approved by the GESI Project for funding. Two members of the evaluation team were present for each interview. The interview team consisted of two engineers, one of whom also holds a PhD in economics. Interviews were conducted with 37 direct beneficiaries out of an estimated total of 50 direct beneficiaries. In some cases, interviews were also conducted with others in a particular village or community who were not direct beneficiaries. The interview team did NOT seek to interview non-beneficiaries in the approximately 3,658 other villages or communities that are scattered across Georgia.

Table 4 gives the names of the regions, municipalities, communities and sub-projects that were visited by the Team, the ratio of active to non-active projects (by community) and the number of people who were interviewed.

Team B interviewed a total of 50–60 individuals who were linked with Component # 5, including direct and indirect beneficiaries, project staff, community leaders, etc. Principle names are given in Appendix 4, but sometimes in group discussions in some villages, for example, or when talking with secondary or indirect beneficiaries, the names of specific individuals could not be collected.

Table 4: Villages visited and analyzed by Evaluation Team for Component # 5.

Regions visited	Municipalities visited	Villages visited	# of Sub-Projects visited	Ratio of active vs. non-active projects	# of Interviewees
Shida-Kartli Region	Kareli	Kekhidjvari	14	5:9	11
Imeriti Region	Bagdati	Nergeeti	10	1:9	11
Guria-Samegrelo Region	Ozurgeti	Likhauri	20	8:12	10
	Senaki	Teklati	6	5:1	5
Totals	4	4	50	19:31	37

2.5.4 Principle Findings

- All communities visited were well aware of the GESI Project. Villagers clearly remembered this project preparation and implementation process five years later.

- All 50 business plans had been prepared in a similar format, and all were either directly or indirectly related to energy issues, meeting the requirements called for by the Contractor’s terms of reference.
- All 50 applicants—successful or not—expressed problems with conditions relating to the project, and all applicants thought that interest rates for loans were too high. Sometimes beneficiaries reported that banks unilaterally changed the terms of repayment.
- All successful applicants (19 out of 50) were either expanding their existing business started under GESI or were adding new or additional businesses.
- Some villagers expressed anger or indicated they were depressed when they heard that their business plans had not been approved.
- People who had prepared business plans that were rejected complained that they were given their rejections only verbally, (not in writing) and did not receive a clear explanation for why they were rejected.
- Some applicants complained about the quality of the advice that was given to them while they were being helped with the preparation of their business plans.
- In villages that Team B visited, no one spoke about problems of deforestation. Four informants explicitly confirmed that forestry issues today in 2010 are no longer a significant issue, although they had been important in 2003 when the project was beginning.
- No applicant (out of a total of 37 who were interviewed) indicated that they had received or been aware of any follow-up meetings by project or USAID staff since the end of the GESI project.

2.5.5 Conclusions

The project was formally responsive to the Terms of Reference, but generally the overall impact of this Component was marginal. The “effective failure rate” of 62%, or 31 out of 50, suggests these efforts were less successful than could be expected with the USAID assistance.³⁶ The criteria for participation were complex, and as the project’s Component # 2 began to take off and the larger political environment changed following the Rose

³⁶ In viewing this success to failure ratio, it is important to keep in mind the folk wisdom often quoted in American business literature, which says that after five years, only 1 small business start up out of 5 will still be in business. Thus a standard rule of thumb is that the success rate for small business start ups in the US is 20%, while the failure rate is 80%. Thus, the project was more successful than the average American business, but then there is the element of USAID support, which is lacking in the USA. This should have resulted in a higher success rate.

Revolution in 2003, the priority for a Community Development Component diminished across Georgia, particularly with regard to issues of energy savings. As with the conclusions drawn for Component # 4, energy issues by themselves do not represent a good organizing principle for SME projects or programs. SME efforts should be driven by primary economic concerns, with energy as a secondary or tertiary priority.

GESI did successfully facilitate access to some financial, technical, social and energy information resources that helped approximately ten communities achieve some modest economic development progress, plus the economic benefits during the construction. The project's criteria for identification and selection were complex; addressing these various, and sometimes competing, priorities drew heavily on staff resources. The villages that Team B visited did show appropriate geographical and topographic variety and Team B concluded that the municipal and village selection process met the broad criteria required by USAID for geographical diversity. Villages seem to be representative of Georgia, as measured by the selection criteria specified.

While GESI successfully facilitated access to some technical resources, this generally involved help with loan applications and business plan preparation. Initial approaches to villages and communities (when the project staff encouraged people to prepare business plans and apply for loans) were handled well, but subsequent project staff communications and follow-up with clients was less responsive. The project did not reach out enough to small business clients with sufficient "after sales servicing". Applicants sometimes expressed frustration with the lack of follow-up business support services. As far as the Team could determine, neither follow-up monitoring nor beneficiary impact assessments were done for the various sub-projects under Component # 5. Applicants repeatedly expressed a need for further technical assistance, both in terms of business practices, and perhaps in terms of technical engineering design or management services.

The Evaluation Team could not find written documentation explaining why some individual sub-projects had been approved or rejected. Some business plans were rejected because the proposed sub-project failed to meet the criteria of being linked to energy-related matters. Most applicants who were interviewed had limited experience with banks, and some were afraid of them. Many applicants gave up after getting an initial letter of rejection. Thirteen applicants told Team B that they did not like the bank's loan repayment procedures. Providing an "after sales service" capacity might have prevented some dropouts or failures.

While GESI didn't help the evaluated communities achieve literal "energy independence"—they receive energy from the grid—it did give a few villages some access to limited, additional sources of local energy. Whether it did this in a cost-effective manner would require further analysis. GESI components # 4 and # 5 jointly provided approximately \$4.2 million dollars' worth of technical assistance and grants and loans, in direct program costs. If indirect costs are included, the total cost increases to more than \$5 million. The impact of the program's directive to develop alternative indigenous renewal energy sources and so reduce communities' over-dependence on

wood cutting was marginal. As of 2010, forest management generally seems to be under control in the villages that were visited by Team B.³⁷ The impact of the program could have been more sustainable when permanent support services had been created for after service to old clients and economic and financing services to new start-ups.

GESI's impact addressing social problems with economically and environmentally sustainable solutions that could generate employment opportunities and increased income potential for rural populations in target communities was marginal, because economic impact was not a prime objective. Fifty potential sub-projects were analyzed and ultimately secured funding. Nineteen were still operating at the time of Team B's visit. In the summer of 2010, these 19 small businesses were estimated to be employing somewhere between 50 to 150 local people *in total*.³⁸ Approximately 19 small businesses (sometimes single families) are directly benefiting from increased income among the communities that were visited. An estimated 100 villagers benefit directly from employment, while an unknown number of villagers benefit indirectly from the construction period and collateral spin-offs. If the same success/failure rate is extrapolated to the 114 business plans that were submitted, then approximately 43 small businesses (or families) could be estimated to be direct beneficiaries, with an extrapolated total of 215 villagers being employed by 43 new businesses.³⁹ Component # 5 helped ten communities and provided direct support to generate some local energy, but Georgia has 3,668 communities. Given the costs of providing such assistance to ten (10) communities, with a total population 8,789 local people, it seems unlikely that USAID could ever scale up the pilot approach that was tested under Component # 5 to a national level. Five million dollars⁴⁰ allocated among ten villages averages to \$500,000 per village. Under this model, working with just 10% of Georgia's 3,668 villages at a similar level of effort would cost more than \$1.8 billion dollars.

3 OVERALL IMPACT OF GESI PROGRAM

3.1 Key Questions

³⁷ The Evaluation Team expresses no judgments about deforestation across all of Georgia, since it did not assess this issue. For forest harvesting, however, Georgia now has a voucher system in place, which villagers can routinely receive from the Government, and issues of corruption seem to have been substantially addressed. Thus, in areas with adequate natural gas supply, the fuel wood situation appears to be substantially under control.

³⁸ During implementation phase, PA and Winrock Project staff estimated that each successful sub-project would on average employ five members of the community. Nineteen projects x 5 employees = 95 jobs created.

³⁹ Calculations and estimations for the total number of jobs created were as follows: of the sample of 50 villages visited, 19 businesses were still functioning, suggesting a 38% success rate. The GESI Program designers and Winrock staff estimated that each business would create on average about 5 jobs, which (5 x 19) equals 95 jobs. If the same job success rate of 38% is applied to the total of 114 business plans that were developed, this suggests that 43 businesses would have been created. At a rate of 5 jobs per business, (5 x 43) this suggests a total of 215 jobs would have been created for all ten villages. If Component # 5 cost \$5 mil, then each job would appear to cost somewhere between \$20,000 and \$25,000.

⁴⁰ See Figure # 1, p. 9 of this Evaluation for PA's representation of direct costs for Component 4. This representation does not include indirect costs, which would push the total over \$5 mil, particularly since some fraction of Component 4 was directed transferred over to Component five for use in these ten villages.

1. *What were the Program's general strengths and weaknesses?*
2. *To what extent did the Program contribute to building a reformed energy sector?*
3. *To what extent did the GESI program contribute to building a stronger power distribution sector with improved governance at national and community levels?*
4. *What was the Program's impact on reforms in energy sector in general?*
5. *What was the impact of distribution reform and commercialization on Georgian economy?*
6. *How did the project contribute to sustainable development of the power sector?*
7. *How did the project contribute to GDP growth, foreign investment, manufacturing stability,*
8. *Sustainability: what elements of the project became sustainable?*
9. *Did the Project achieve its Goals and Objectives?*

3.2 Findings

What were the Program's general strengths and weaknesses?

- **Strength:** GESI's relatively flexible design, and/or implementation modalities allowed for effective redeployment of funds and resources based on emerging needs. This became critical for the overall success of the GESI project, and particularly for the substantial shift of funds from Component # 1 to Component # 2. Figure 5 shows how funds were initially expected to be programmed in the green column, (by Component), and how they were actually expended, in blue. The shifts between Tasks or Components # 1 and 2 are most notable.

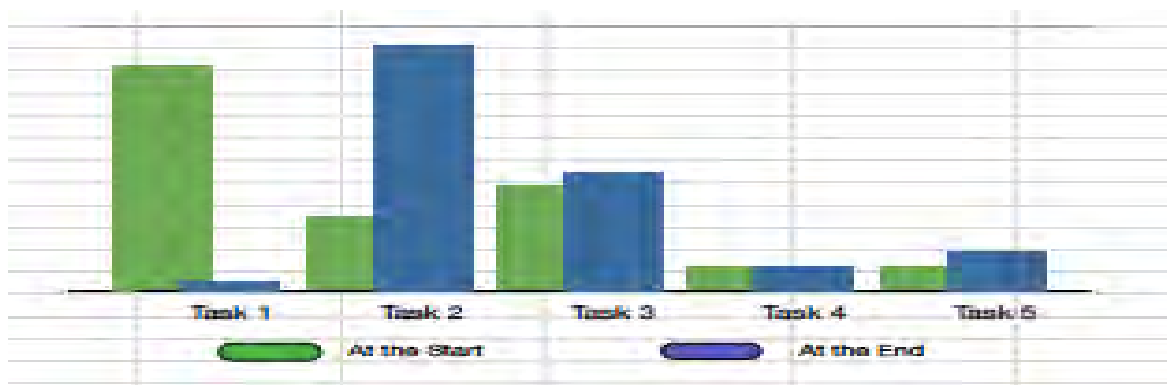


Figure 4: Initial funding by component vs. actuals

- **Weakness:** The GESI Project was relative weak in the area of community development and community-level funding (Components # 4 and # 5.) The relatively complex criteria for choosing community-level sub-project interventions, while consistent with the project design and PA's contract, still served to impede activities at the community level.

To what extent did the Program contribute to building a reformed energy sector?

- GESI's contributions to the power production (or supply) side were negligible, but its contributions on the distribution (or demand side) were substantial. USAID and PA are both to be commended for their flexible resourcefulness in redeploying resources to permit Component # 2 to take off, and in efforts to link Components # 2 and # 3 together, so conditions of vulnerable populations were addressed; this income stream was also used to help fund improvements in power distribution systems.
- While PA and UEDC were reforming and restructuring power distribution outside Tbilisi, Telasi was introducing approximately the same reforms in Tbilisi, and GSE was bringing similar reforms to high voltage transmission. At approximately the same time, the Armenian power sector was also being reformed. The Rose Revolution coincided with PA Consulting's efforts to reform the distribution systems outside of Tbilisi. Thus, there was both political will and some level of technocratic capacity within the GoG that provided support and allowed the reforms to go forward. The GESI project and the contractor were moving with the tide, not against it.

To what extent did the GESI program contribute to building a stronger power distribution sector with improved governance at national and community levels?

- USAID, the GESI Project, PA Consulting and UEDC all contributed significantly to reforms of the power distribution sector across Georgia, reaching down to the smallest communities, although it is useful to mention that they were not working in a vacuum. AES Telasi had initiated many significant management reforms in Tbilisi circa 2000. Telasi continued such reforms in Tbilisi while UEDC was instituting similar reforms in 2003 outside of Tbilisi. Many of these reforms involve almost generic management issues that are used by many power utilities around the world, particularly in relatively developed economies.

“Unless we fix the electricity crises in the country before winter, we could face another wave of dissatisfied Georgians that could lead to another Revolution.”

—Zurab Zhvania,
Prime Minister of Georgia,
in a meeting during the Fall of 2004,
as quoted by Mamuka Kikalishvili,
former UEDC Regional Director
(Interviewee # 3).

- UEDC certainly improved billing and collection along with other aspects of UEDC's management, which has contributed to improving governance within the power sector—in part because improved management made meaningful data available and policy makers could make meaningful decisions about governance issues. At some level, reforms of the power sector in Georgia may have served as a model for reforms in other sectors, and certainly served as an important tool to give the central government enhanced legitimacy and credibility.

What was the GESI Program's impact on reforms in the energy sector in general?

- At a formal level, the Georgian Government oversees the energy sector, through the Executive Branch (particularly the Ministry of Energy) and the Parliament. UEDC and other power generation and distribution companies in Georgia all work under the Regulatory Agency SEMEK. UEDC's and Telasi's operational reforms on a day-to-day basis served as models for reform by successfully commercializing the provision of power. This showed that institutions could be reformed, and reliable power could be provided 24 hours per day.

What was the impact of distribution reform and commercialization on the Georgian economy?

- At the simplest level, distribution reform eventually allowed the sale of UEDC to Energo-Pro for \$130 million, after USAID invested around \$18 million dollars. It also served as a model for possible reforms, along with other parallel reform activities in other utilities in Georgia and across the Region. Distribution reforms and commercialization had a huge impact on the economy in general. Such reforms contributed to improving the larger commercial 'enabling environment' for Georgia.

How did the project contribute to sustainable development of the power sector?

- The project commercialized power distribution, making the utilities self-sustaining. It put into place important management systems and principles. It changed the corporate culture of UEDC, so that it could function as a for-profit power utility. It trained the public to pay for services. And it helped lay the groundwork for further commercial investments in the power sector in generation and distribution.

How did the project contribute to GDP growth, foreign investment, manufacturing stability, and reduced reliance on higher cost backup systems?

- Reliable power and a reliable dependable power sector represent a critical foundation for GDP growth. Reliable power supply also gives stability to manufacturers. It is not practical to quantify the impact of GESI on direct GDP growth, but by demonstrating a functioning model, GESI's indirect impact was substantial.
- At the simplest level, the sale of GESI to an outside investor was a good example of its impact on foreign investment. Probably even more important, however, was its influence on helping to define the larger investment climate for Georgia.
- Using primary power supplies in a routine manner should reduce reliance upon higher backup costs. Fewer breakdowns from an improved, rationalized operating system means less demand on backup systems.

Sustainability: what elements of the project became sustainable?

- The reliability of the distribution system appears to be sustainable, provided the restoration of obsolete equipment continues. Reliability is partially demonstrated by the continued effective service delivery that comes from UEDC's successor, Energo-Pro, as well as by Telasi, and the general availability of 24 hour power around the country today.
- GESI's impact upon the larger investment and enabling environment through the commercialization and privatization of the distribution sector likely will be sustained, although this will also require continued outside political and economic support for Georgia from bilateral and IFI donors.
- As they operated under GESI, the Community Development and credit components don't appear to be scalable, sustainable, or replicable. There may be lessons that can be learned from these investments, however, that could be applied to future USAID programming initiatives in Georgia. There is some indication that some of these lessons may have been carried over to other subsequent NGO and credit activities after GESI ceased operations. Local populations and applicants, CBOs, and national NGOs gained new knowledge and expertise. Today, in 2010, this new expertise is being used on new projects and programs.

Did the Project achieve its Goals and Objectives?

- In a narrow sense, GESI was designed to invest approximately \$14 mil to provide Quick Hits, and to improve the hydro-power production capacity of the country by adding 100 - 150 MW of power. However, the GESI project added no significant new power generating capacity. This element was expected to last four years. US State Department cancelled this activity, so this element ceased within six months, and USAID shifted focus from power generation (supply) to power distribution (demand). In this narrow sense, the GESI project did not achieve its primary objective at the time, but other donors following the GESI trail were successful in restoring the hydropower sites later.
- As this Evaluation initially stated in the section, *Background and Summary Description of the GESI Project*: "The Program was designed to improve the overall performance of the electrical energy sector and assist those parts of the population that were underserved by it." Considering the reality on the ground, no one could know in 2003 what was going to work in the future, and in fact both USAID and PA Consulting showed resourcefulness in shifting focus from improving energy production to energy distribution. If the larger goal was to help get the Georgian power sector functioning in a modern way, and support the larger economic development of Georgia through meaningful reforms of the energy sector, then GESI should be deemed a resounding success.

- GESI continued to carry out the previously established GWHAP program for an additional two years in ways that continued to support the most vulnerable parts of the Georgian society⁴¹ while also providing what was in effect ‘bridging money’ to allow the power distribution sector to resume functioning in a modern and efficient manner.
- At the small business community development level, GESI may have met its somewhat loosely defined goals and objectives, but from a larger perspective, the expenditures of approximately \$5 mil to benefit 10 villages appears to represent a questionable investment, since it addressed only 0.27% of the villages of Georgia and helped only a fraction of the 8,789 residents of the 10 villages served. At a broader level, the NGO community and other stakeholders appear to have learned some significant lessons about how to design and structure meaningful community development programs from the pilot work done on the GESI Project. Staff that worked on GESI, for example, are now working with other NGOs in Georgia, and they are said to be more familiar with modern training methods and know more about what is important for successful subproject implementation and sustainability.

4 RECOMMENDATIONS

4.1 Background

Because the GESI Project commenced more than seven years ago and ended nearly three years ago, and because the energy sector of Georgia has changed dramatically since the project was designed, the Evaluation Team explicitly has not looked backwards to formulate specific recommendations for individual components of the GESI Project. Instead, it has sought to examine USAID Georgia’s next few years, and what lessons learned from this Evaluation look to the future.

4.2 Major recommendations

1. **USAID should consider a Hedging Strategy** or build suitable flexibility into its projects. In 2003, no one could predict the future of the Georgian energy sector. The GESI project reflects an *implicit* USAID Hedging Strategy, because it was designed with five separate but related components. Initially, USAID expected Component # 1 to represent the main project focus. However, USAID had to change direction, and switched attention to Component # 2. This is a good example of programmatic flexibility, which could help inform future Hedging Strategies in other USAID projects.
2. **Program designs and objectives should also be kept simple.** While trying to incorporate flexibility into overall design approaches, USAID should also consider the principle of simplicity. Examining the multiple overlapping objectives of

⁴¹ Roughly estimated to be approximately 15 % of the total population.

Components # 4 and # 5, for example, the Evaluation Team is struck by the relative complexity of the design.⁴²

3. The Mission should maintain the need for legitimate programmatic flexibility while keeping projects appropriately focused on realistic targets. Balancing the tension between flexibility and focus may represent an important challenge.
4. **Consider Monitoring, Evaluation, and Feedback loops.** Monitoring and evaluation typically are important elements of any successful organization. USAID/Georgia might consider putting more resources into its M & E functions⁴³ in order to get better feedback on projects being implemented and completed projects, or to support projects that are being contemplated. Some examples of M & E work, and ideas to explore include the following:
 - One example of a positive feedback loop could be this GESI Evaluation itself, which discovered during the course of field work and interviews that the beneficiaries of Component # 5 felt that they needed enhanced business support services, which in turn leads to recommendation # 8, below.
 - Another example, also from this Evaluation, is the suggestion to explore working in urban rather than rural areas (# 6, below) if USAID’s objective is economic job creation.

Some other ideas to consider might include:

- Have USAID Project Managers independently prepare yearly or biennial (every other year) progress statements on individual projects that can be compared with the Contractor’s annual work plans; input the data to a Mission-level Management Information System (MIS), thus addressing suitable monitoring and evaluation indicators.

⁴² Component # 4 was expected to carry out a host of complex activities with less than \$1 mil: (i) access the possibilities of establishing a credit program in Georgia; (ii) identify types of facilities that appeared potentially viable (iii) identify sources of capital for infusion into the program; and (iv) present a program in sufficient detail for USAID to make a decision whether to proceed with the component. From there, the contractor went on attempt to: (v) develop a Credit Authority (DCA) to support \$3 million in credit worthy loans; (vi) develop a Loan Guarantee Fund of \$600,000 for less credit worthy projects, and a grants program; and (vii) conduct training programs. Component # 5 had an equally formidable list of objectives, tasks, and assignments.

⁴³ A draft piece of legislation which has been prepared for the House, “Global Partnerships Act of 2010” which is intended to replace the Foreign Assistance Act of 1961. This draft bill instructs the President of the United States to “Develop a plan for improving the capacity of the Agency [USAID] to conduct rigorous and objective program monitoring and evaluation” and further to “Develop...an annual evaluation plan...” It then goes on to say, “Up to 5 percent of the amounts made available for programs, projects, and activities under this Act in a fiscal year may be used to monitor and evaluate such programs...” While Congress clearly will not pass this legislation this year, something like it eventually will be passed, and it will probably ask for enhanced evaluation procedures.

- Prepare after-action reports on all projects within some reasonable, fixed period after their completion. These reports should be independent appraisals of each project. The priority should be to capture lessons learned that feed into future USAID Georgia programming initiatives.
- Beneficiary impact assessments should be made for most projects, and many sub-projects. Follow-up monitoring should be routinely incorporated into USAID’s programming strategies (subproject cost ceilings, durations, typology, geographical area, beneficiary categories, etc.), in order to build in appropriate feed-back mechanisms.

4. Demand side management & energy conservation. Because substantial improvements in the overall Georgian power sector have been made, USAID Georgia should remain focused on the energy demand side, rather than the supply side. USAID could now consider looking at issues of energy demand management, energy planning and particularly at energy conservation. Some significant portion of the energy that is being produced and distributed across Georgia is not being used as efficiently as it could. Many things could be done to improve energy efficiency. The Mission might explore such initiatives.⁴⁴

5. Assess Program Risks. At an operational level, the GESI project—particularly Component # 2—represented a complex, high-risk gamble. On the other side; doing nothing presented the prospect of total collapse of the electric power structure. When PA Consulting took over direct responsibility for day-to-day management of UEDC, the United States Government and PA Consulting both moved into an extraordinary position. At that time, sometime in late 2003 or early 2004, PA was no longer serving as technical advisors to a Georgian utility. Instead, they were running it. The implication behind PA assuming such responsibility should be carefully assessed by the U.S. Government, particularly since this process reportedly was contentious within the U.S. Mission to Georgia.⁴⁵ By 2006, the USAID and PA Consulting had turned UEDC around, but the implications for future gambles should be clearly analyzed by policy makers. In the future, a Public-Private Partnership (PPP) might be more appropriate and might reduce the risk for the United States.

6. Focus development on urban municipalities rather than rural areas. Based on the evaluation team’s review of the 10 villages that were part of Component # 5, the Mission might explore the implications of working with urban populations. These may prove somewhat easier to access and may offer better opportunities for starting small businesses and community development programs. Perhaps better opportunities for employment generation exist in municipal areas. Georgia could create several growth nodes that

44 Energy conservation is an important element of demand management, although it goes well beyond electrical issues. It can mean putting in gas heaters, for example, which have a better overall efficiency than electrical heaters. A large factory that needs both energy and heat can be urged to promote to use “waste” energy to heat the factory. Sewage stations that generate methane can be used for heating. Such approaches could all become part of a comprehensive energy conservation program.

45 Source: Interview with Dean White, COP, GESI.

would represent better targets for donor investments. For the rural areas across Georgia, it might be more cost effective to simply short-term employment through community development initiatives like road construction, reforestation, or erosion control schemes.

7. Analyze SME banking needs. The economic and business environment in Georgia has changed significantly since the GESI Program was created. Some projects that might have been funded under the DCA facility now might qualify for normal bank financing. USAID should consider a study to see if such financing is available.

8. Business development extension agents. Future USAID credit and small business development projects should include provisions for more follow-up outreach and extension services to individual clients. Georgian small businesses need a small business extension service to help them grow and flourish.

9. Consider Local Contributions & Fees for Service (*in the form of cash, labor, time and/or energy*). If USAID proceeds with additional community development projects as part of its future portfolio, then it should establish reasonable criteria for local community contributions to secure appropriate community buy-in and ownership of sub-projects. This is important for operations and maintenance, and can help address sustainability issues.

ANNEXES

ANNEX 1: Evaluation Scope of Work

GESI Program

Georgia Energy Security Initiative (the Program) was implemented by PA. The Program was designed to improve the overall performance of the electricity sector and to assist sectors of the populace that were underserved from an energy perspective. Several project tasks addressed technical electricity generation and distribution issues. Several tasks concentrated more on solutions aimed at ameliorating present social inequities and improving the economic well being of individuals or communities. For instance, one task continued the on-going Georgia Winter Heating Assistance Program (GWHAP) by providing electricity subsidies to the neediest households and socially critical institutions. The electricity distribution and the hydropower upgrade tasks also included elements designed to augment the GWHAP assistance and ultimately replace the financial assistance with the delivery of electricity. Several other tasks were designed to help several remote communities reduce their over dependence on wood cutting by developing alternative indigenous renewal energy sources.

The five main activities were:

- Restoration of Hydropower - Capital Maintenance and Rehabilitation;
- Electricity Distribution Improvement - including management support for the Unified Energy Distribution Company (UEDC);
- Georgia Winter Heating Assistance Program;
- Credit Facility Development;
- Community Development.

Purpose of the Evaluation

GESI Program

The contractor shall assess the accomplishments of the Program; evaluate impact of the program at the national level and; analyze specific results of the Program in the following areas:

- Hydropower restoration
 - leveraging funds for power restoration
- Electricity distribution sector reforms
 - Metering, billing and collection
 - Personnel capacity building
 - Public relations, awareness, and participation
 - Re-metering (wholesale and households)
- Winter utility subsidy program
 - Methodology
 - Database
 - GOG capacity building
- Credit Facility
- Community Development
 - energy production and energy conservation/efficiency
 - communities access to resources (including financial, technical, social, energy and information) to help achieve economic development and energy independence

- employment opportunities and increased income potential for rural populations

General questions to be addressed

The contractor shall review and summarize the implementation and results achieved by the project to answer the following as well as additional questions developed by an evaluation team:

GESI Program

- What was the Program's role and impact on reforms in energy sector in general?
- To what extent has the Program contributed to building a reformed energy sector and specifically a power distribution sector with improved governance at national and community levels?
- What was the impact of distribution reform and commercialization on Georgian economy (e.g., contribution of reliable power to GDP growth, foreign investment, manufacturing stability, reduced reliance on higher cost backup systems?)

Specific questions for each program component of GESI Program:

Hydropower restoration

- What was the impact of "quick hits" studies produced under the Program?
- Have investments for hydropower restoration been leveraged by these studies? If not, what appears to be the reasons(s) that these studies were not effective?

Electricity distribution sector reforms

- What was the impact of improved metering, billing and collection? Does it continue? Has it changed? Why and to what effect?
- What was the impact of downsizing UEDC staff on overall company performance and efficiency?
- Has the human capacity of the UEDC personnel increased as a result of the human resources reforms conducted by the management contractor? To what degree has personnel of the UEDC assimilated new management tools/techniques provided and developed by PA under the Program? How have they used them?
- What was overall impact of the reform strategy implemented by PA on UEDC performance? What changes have been forthcoming?
- What was the impact of the information/communication campaign which targeted media and the general public?
- Did this campaign contribute to better understanding of energy issues by the public and did it increase support to the UEDC management contractor efforts to reform and rebuild the power distribution sector? If not, why?
- What was the impact of this campaign on public to support communal remetering?
- What was the impact of improvements in UEDC (e.g. increased collection rate, reduced losses, etc) on Georgia power sector and attraction of private ownership in the sector? If there was little or no impact what was missing to make it more effective?
- What was the impact of UEDC management contractor on reflecting actual costs in electricity tariffs on retail level outside Tbilisi?

Winter utility subsidy program

- What overall impact of GWHAP activity implemented under the Program was on power sector performance?

- How GWHAP program supported the privatization process and energy sector reform? Did it prevent public backlash by providing a social safety net for the most vulnerable households of Georgia? How effective was the program in ensuring that the most vulnerable households had access to electricity during the winter months?
- One of the program's objective was to provide cash flows to the electric distribution companies (LDCs) to support their efforts in increasing collections and improving their operations. Was this effective and did it have significant impact on electricity distribution companies performance? If not, why not?
- What was the impact of GWHAP implemented under the Program on assistance program developed by the GOG after GWHAP phase out? How effectively the database and methodology utilized by PA for GWHAP was used by the GOG in GOG established assistance program to vulnerables?
- Has the GOG' s capacity, specifically the capacity of the Ministry of Labor, Health and Social Affairs, to implement subsidy programs increased as a result of the Programs capacity building interventions?

Credit Facility

- What was the impact of credit facility developed under the Program on improving energy supply and improving energy efficiency by increasing access to credit facilities?
- How effective was the credit facility developed under the Program? Is there ongoing capacity? If not, what was missing to institute this capacity?

Community Development

- What was the impact of the community development efforts implemented under the program on addressing energy issues on the community level through both energy production and energy conservation/efficiency activities?
- How effectively and successfully did the Program facilitate access to resources (including financial, technical, social and energy information), which were intended to enable communities to help achieve economic development and energy independence? What were the most effective activities? What was missing for activities that were not as successful?
- What was the impact of the Program on addressing social problems with economically and environmentally sustainable solutions that were intended to generate employment opportunities, increase income potential for rural populations in target communities and reduce their over dependence on wood cutting by developing alternative indigenous renewal energy sources. If they were not effective what was missing?

Specific Question regarding the Program approaches

What were the strengths and weaknesses of the approaches implied by the Program?

Performance Period

The contractor is required to conduct this evaluation over a period of approximately six weeks. The team will spend at least four weeks in Georgia to complete the necessary analysis and draft reports. Up to five working days preparation (document reviews). Twenty working days working throughout the country including interviews, field visits, preparation of draft report and debriefing for the USAID/EG and USAID/EE offices. Initial draft assessment reports shall be presented no later than three days prior to departure from Georgia for Mission review and

comment. Five working days follow-up for consideration of USAID comments (to be provided within ten working days after submission of the draft) A six-day workweek is authorized while in Georgia.

Annex 2: Extract from PA Consultant’s Scope of Work.¹

“The work carried out under this task order will support USAID/Caucasus’ Strategic Objective 1.5, “*A More Economically Efficient and Environmentally Sustainable Energy Sector*” and the following Intermediate Results (IR):

IR 1.5.1 – Increased Private Sector Participation in the Energy Sector;

IR 1.5.2 -- A Legal and Regulatory Environment More Conducive to Private Investment in the Energy Sector;

IR 1.5.3 -- Environmentally Sound Laws Adopted and Implemented in the Energy Sector;

IR 1.5.4 – Increased Efficiency in the Energy Sector.

“The [Georgia] Energy Security Initiative is an ambitious and integrated approach to improving operations of the energy sector. The program is designed to increase the efficient use of energy in Georgia and to help provide adequate and reasonably priced energy supplies for the Georgian population. The assistance will provide (restore previously installed capacity) additional electricity power for direct sale to distribution companies and to the wholesale energy market (grid for purchase throughout the country). It will also provide technical assistance, advisory services, and training to resolve financial or technological difficulties that presently interfere with objective achievements. The [G]ESI has five closely related objectives:

1. Increase the supply of indigenously generated power through the rehabilitation and improvement of existing hydropower facilities;
2. Create a well-managed and financially viable distribution system in connection with the increased generation’
3. Ensure that the most vulnerable of the population continue to be protected from bearing a disproportional share of the privatization burden;
4. Develop a credit program to increase access to credit for a range of energy-related activities; and
5. Assist underserved communities to meet their household and community energy needs through the development of alternative energy sources.

“The Contractor is required to demonstrate that its activities will produce tangible benefits for all citizens of Georgia, achieve reasonable cost and/or increased availability of electricity, and assure that such energy improvements be shared by both residents of Tbilisi and those living in rural areas.”

¹ PA Contract with USAID for Implementation of GESI Project, dated _____, p. C – 4.

ANNEX 3: Evaluation Design and Methodology

Methodology

In consultation with USAID, the Contractor shall perform the following tasks:

1. Draft Work Plans for the Assessment of the three projects and present for review to AOTR/COTRs of the activities on the second day following arrival in-country. USAID will provide an initial list of in-country contacts prior to team arrival as well as assist in logistics of appointing meetings;
2. Develop a questionnaire to be addressed during the evaluation that should be completed by the close of the second working day in country;
3. Review all relevant information and additional materials that may be necessary to support drafting of the evaluation report;
4. Conduct interviews with the appropriate staff of USAID/Georgia, sub-grantees/end-users, Georgian government, business associations, other private sector and certification entities;
5. Perform field trips as needed (to Ajara, Kakheti, Shida Kartli, Imereti, Samegrelo, Samtskhe-Javakheti regions) to interview project beneficiaries, business associations, and local government representatives;
6. Present a draft outline to USAID by the 12th calendar day in country and draft sections by the 18th calendar day. The final draft report will include an Executive Summary.
7. Conduct debriefing for USAID/EE Office on GESI Program before departing the country.
8. Prepare three written final reports, incorporating comments from the debriefing as well as written comments from USAID, and submit to USAID.
9. Final evaluation reports shall include an executive summary, table of contents, body, appendices, and shall not exceed 40 pages, excluding the appendices.

Supervision and Technical Guidance

The evaluation team should work in close consultation with:

- USAID/EE team including: office Director John Hansen, GESI Project Manager/COTR - Nick Okreshidze, other EE Office local staff as necessary, and PA personnel formerly employed by the program.

Logistic Support

The Contractor will be provided with limited logistical support by USAID. The Mission will provide assistance to set up and manage the consultant's meetings schedule in Georgia. The Mission will assist in arranging for local transportation and for making travel arrangements within Georgia as required, though all payment /funds outlay for these services shall be made by the Contractor. USAID staff may accompany the assessment team on some meetings in Tbilisi and in the region. After reviewing the schedule of the meetings, the USAID/EE team will make a decision on which meetings to attend and inform the contractor in advance.

The Program Documents for Review

1. SOW for the Program
2. The Program final reports
3. The Program quarterly reports

4. The Program work plans
5. Public opinion surveys and pools
6. Studies/assessments produced under the Program
7. The other program documents which will be provided by the EG and EE offices in Tbilisi
8. Impact of Unreliable Power Supply on Georgian Economy, BP funded assessment for GESI program assessment.

Annex 4: List of persons Interviewed by GESI evaluation team

<i>#</i>	<i>Name, title</i>	<i>Title</i>	<i>Contact information</i>	<i>Component (task) #</i>
1	Nicholas Okreshidze	GESI Project Manager/COTR	Office of Energy and Environment USAID/Caucas 11 George Balanchine Street 0131 Tbilisi, Georgia Tel: 995 32 544 123 Mob: 995 99 275 002 e-mail: nokreshidze@usaid.gov	1,2,3,4,5
2	Dean White	GESI COP/UEDC General Manager	Mob: 899 610980	1,2,3,4,5
3	Mamuka Kikalishvili	UEDC Director	Mob: 895 959500 Tel: 958037 e-mail: Mamuka.Kikalishvili@gmail.com	Mostly 2
4	David Sharashenidze	UEDC Deputy General Director in HR	Mob: 899 559900	Mostly 2
5	George Ramishvili	ex-Winrock, engineer.	Tbilisi	4-5
6	Giorgi Cheishvili	GWHAP Program Manager (now National Agency for Cultural Heritage)	Tbilisi Mob: 877 253338 e-mail: gtcheishvili@hotmail.com	3
7	Inga Pkhaladze	Community Development Manager , Winrock	Mob: 899 578520 Tel: 298955 e-mail: ipkhaladze@winrock.ge	5
8	Nino Shanidze	UEDC billing system	Mob: 899 547050	2
9	Avto Lomiashvili	Engineer cooperating with GESI on community projects, Winrock	Mob: 895 226683 Tel: 506343 e-mail: alomiashvili@winrock.ge	Part of 5
10	Nino Saakashvili	Chairperson cooperating with GESI on community projects, President HORIZONTALI	17 Bakhtrioni street, Tbilisi Mob: 899 578680 e-mail: nsaakashvili@evaluation.org.ge	5
11	Buba Tsirekidze	PR cooperating with UEDC	Mob: 877 416888	5
12	Alexander Khetaguri	Former deputy and Current Minister of Energy	Tbilisi	
13	Maia Bitsadze	Curriculum expert, ex-Horizonti	University Ilia, room 317, Adm. corpus, Tbilisi Mob: 899 148056 Tel: 877 513551 e-mail: maia.bitsadze@iliauni.edu.ge	4-5

14	Zurab Kakabadze	ABCO-Georgia	7 Kipshidze street, Tbilisi Mob.: 899 915802 Tel: 250085/999077 e-mail: abco@caucasus.net	4-5
15	Konstantine Zhgenti	President, ABCO-Georgia (Association of Business Consulting Organizations of Georgia)	7 Kipshidze street, Tbilisi Mob: 899 569337 Tel: 999077/ 250085 e-mail: abco@caucasus.net	5
16	Erekle Baqradze	Head of Metering and Settlement Department of South Georgia Branch, ENERGO-PRO Georgia	Mob.: 895 951166 e-mail: erekle.baqradze@energo-pro.ge	2
17	Giorgi Giorgobiani	PA Consulting project manager	Mob.: 899 690064 e-mail: giorgi.giorgobiani@paconsulting.com	4
18	Mamuka Kobalia	Technical Director TELASI	#3 Vani street, 6 floor, Didube, Tbilisi Tel: 779839 e-mail: Mamuka.kobalia@telasi.ge	2, 3
19	Koba Lomtadze	Zestaponi service center ex-manager (in UEDC time) (now based in Tbilisi)	Tbilisi Mob.: 899 538811;	2
20	Alexandre Tortladze	Zestaponi service center manager (UEDC), ENERGO-PRO Georgia	75 Tamar mepe street, Zestaponi Mob.: 895 95 07 55	2
21	Zaza Tavkheldize	Kutaisi service center dep. manager (UEDC), ENERGO-PRO Georgia	3 Nikea lane, Kutaisi Mob.: 895 95 06 92	2
22	Mikhael Aslanishvili	Gori service center Manager (works since UEDC time), ENERGO-PRO Georgia	Gori, v. Ortashani, (Shindisi road #3 km) Mob.: 895 95 13 30	2
23	Jemal Mchedlishvili	Kareli service centre manager (works since UEDC time), ENERGO-PRO Georgia	57 Tamarashvili street, Kareli Mob.: 895 95 11 30	2
24	Zaur Mamukashvili	Akhaltsikhe service centre manager (works since UEDC time), ENERGO-PRO Georgia	Akhaltsikhe Mob.: 895 95 09 65	2
25	Amiran Jinozashvili	Akhaltsikhe service centre engineer/master, ENERGO-PRO Georgia	Akhaltsikhe Mob.: 895 580585	2
26	Petre Kachkachishvili	West Georgia branch Director, ENERGO-PRO Georgia	3 Nikea street, Kutaisi Mob.: 895 950645 e-mail: petre.kachkachishvili@energo-pro.ge	2
27	Nugzar Beridze	Manager of the electricity and energy department, SEMEK (Georgian Energy and	26 Chechelashvili street, Kutaisi Mob.: 899 504726 / 897 251784	2

		Water Regulatory Commission)		
28	Shota Abuladze	Kakharethes Chief Engineer	v. Kakhareti, Akhaltsikhe Mob.:	2
29	Radoslav Dudolenski	General Director, ENERGO-PRO Georgia	45 Kazbegi street, Tbilisi Mob.: 895 226283 e-mail: r.dudolenski@energo-pro.com	2
30	Josef Natroshvili	Commercial Manager, ENERGO-PRO Georgia	45 Kazbegi street, Tbilisi Mob.: 895 950001 e-mail: j.natroshvili@energo-pro.ge	2
31	Joseph Melitauri	Senior Operations Officer, Sustainable Development Department, The World Bank office	5a Nino Ramishvili street, Tbilisi mob.: 899 110833 e-mail: jmelitauri@worldbank.org	1, 2, & 3
32	Nodar Kapanadze,	Consultant for monitoring, evaluation and planning data analysis and development (ex-Head of Department State Department of Statistics)	Tbilisi Mob.: 899 570539 Email: kapanadzen@gmail.com	5
33	Devi Khechinashvili	Chairman PSI (Partnership for Social Initiatives)	9a Chitaia street, Tbilisi Tel: 912040 e-mail: intec@caucasus.net	5
34	Nana Janashia	Executive Director, CENN (Caucasus Environmental NGO Network)	27 Betlemi street, Tbilisi Mob.: 899 577722 e-mail: nana.janashia@cenn.org	3, 5
35	Giga Mandaria	West Georgia Regional Manager (former Account Manager), Kutaisi Branch, Bank of Georgia	Kutaisi Mob.: 899 988869/ 897444400	4
36	Temur Abuladze	Manager of the Credit Department (former Deputy Director of Credit Department), Tbilisi, Liberty Bank	Chavchavadze avenue, Tbilisi Mob.: 877 435121	4
37	Giorgi Khechinashvili	Gldani branch Manager (former Account Manager), Gori Branch, Bank Of Georgia	Gldani, Tbilisi Mob.: 899 979030	4
38	Bela Dakhundaridze	Manager, Kutaisi Branch, Bank of Georgia	Kutaisi Mob.: 899 439009	4
39	Sulkhan Orbelidze	GSI Dispatch Center	Zestaponi	2
40	Rati Chelidze	GSI Dispatch Center	Zestaponi	2
41	George Breladze	GSI Dispatch Center	Zestaponi	2
42	Sergi Tsertsvadze	GSI Dispatch Center	Zestaponi	2
43	Raindi Kapanadze	GSI Dispatch Center	Zestaponi	2
44	Gia Kalandadze	GSI Dispatch Center engineer	Zestaponi Mob: 895950860	2

45	Zurab Lakishvili	Applicant, CBO DZAMA	v. Kekhijvari, Kareli Mob.: 893 941455	5
46	Zurab Gochiashvili	Applicant, CBO DZAMA	v. Kekhijvari, Kareli Mob.: 858 215839	5
47	Zurab Bankanashvili	Applicant, holiday complex	v. Kekhijvari, Kareli Mob.: 855 272832/ 890 272832	5
48	Besik Bankanashvili	Applicant, cardboard boxes	v. Kekhijvari, Kareli Mob.: 899 731331	5
49	Khvtiso Lomitashvili	Applicant, greenhouse	v. Kekhijvari, Kareli Mob.: 855 248246	5
50	Ilia Evstapishvili	Applicant, greenhouse	v. Kekhijvari, Kareli Mob.: 899 737586	5
51	Soso Lomitashvili	Applicant, greenhouse	v. Kekhijvari, Kareli Mob.: 857 387763	5
52	Irakli Busishvili	Applicant, greenhouse	v. Kekhijvari, Kareli Mob.: 898 317635	5
53	Paata Lomitashvili	Applicant, wafer	v. Kekhijvari, Kareli Mob.: 899 276170	5
54	Tamaz Lomitashvili	Applicant, Kekhijvari Ltd.	v. Kekhijvari, Kareli Mob.: 899 538084	5
55	Jemal Maisuradze	Applicant, ritual service	v. Nergeeti, Bagdati	5
56	Gocha Maisuradze	Applicant, Fish farmer	v. Nergeeti, Bagdati Mob.: 895 225065	5
57	Iuri Chrelashvili	Applicant, Limonde producer	v. Nergeeti, Bagdati Mob.: 899 716519	5
58	Iuri Maisuradze	Applicant, timber	v. Nergeeti, Bagdati	5
59	Zaur Chubinidze	Applicant, greenhouse	v. Nergeeti, Bagdati	5
60	Temur Kupradze	Applicant, furniture	v. Nergeeti, Bagdati	
61	Gia Chkhatarashvili	Applicant, CBO LIKHAURI, ACHI HPP	v. Likhuri, Ozurgeti Mob: 895 778869	5
62	Vazha Patarava	Applicant, wine	v. Likhuri, Ozurgeti Mob: 899 564859	5
63	Giorgi Maminashvili	Applicant, fish, Ltd SIMON-GOGIA	v. Likhuri, Ozurgeti	5
64	Marina Gokhua	Applicant, auto service Tengiz Tsetskhladze	v. Likhuri, Ozurgeti	5
65	Merab Girkvelidze	Applicant, ritual service	v. Likhuri, Ozurgeti	5
66	David Shilakadze	Applicant, fish	v. Likhuri, Ozurgeti	5
67	Nodar Tsetskhladze	Applicant, furniture	v. Likhuri, Ozurgeti	5
68	Guram Kirtava	Applicant, ritual service	v. Teklati, Senaki Mob: 899 540727	5

69	Dato Pataraiia	Applicant, CBO Teklati	v. Teklati, Senaki Mob: 898 523784	5
70	Limora Ardia	Applicant, LtD KHORGISHI	v. Teklati, Senaki Mob: 895 539325	5
71	Mamuka Alania	Applicant, LtD NAKORU	v. Teklati, Senaki Mob: 890 999949	5
72	Badri Garuchava	Applicant, Milk	v. Teklati, Senaki Mob.: 895 302941	5
73	Mamuka Ardia	Head of Municipality	v. Teklati, Senaki Mob.: 891 155959	5
74	Irakli Avaliani	Telasi	Tbilisi Mob: 895 950011	3
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82	Keti Sandroshvili	GOGC (Georgian Oil and Gas Corporation)	21 Kakheti Highway, Tbilisi Mob.: 877 481838 E-mail: k.sandroshvili@gogc.ge	4
83	Akaki Kvantaliani	Chief of Engineering Department, GOGC (Georgian Oil and Gas Corporation)	21 Kakheti Highway, Tbilisi Mob.: 899 777783 E-mail: a.kvantaliani@gogc.ge	4
84	Teimuraz Gochitashvili	Advisor, Strategic and policy affairs, GOGC (Georgian Oil and Gas Corporation)	21 Kakheti Highway, Tbilisi Mob.: 899 106615 E-mail: t.gochitashvili@gogc.ge	4

84	Simon Tabatadze	Manager, Kakhareti HPP	Akhaltsikhe	2
85	Pridon Zarishvili	Technical personnel, Kakhareti HPP	Akhaltsikhe	2
86	Bakur Bochorishvili	Technical personnel, Kakhareti HPP	Akhaltsikhe	2
87	Merab Amkoladze	Dispatch center engineer	Zestaponi	2
88	Tengiz Kapanadze	Dispatch center engineer	Zestaponi	2
89	Genadi Chkhikvadze	Dispatch center engineer	Zestaponi	2
90	Guram Kalandadze	Operator of hydro-station and power generation facility	Gumati Mob: 895 260 235	1
91	Ludmila Gandeliani	GWHAP Data Base Manager	2 Sandro Euli street, Tbilisi Mob: 895 950360	3
92	Temur Jugeli	Member of Management Board, GSE (Georgian State Electrosystem)	2 Baratashvili street, room #403, Tbilisi Mob: 877 998811 E-mil: temuri.jugeli@gse.com.ge	1
93	Sue Ellis	International Relief and Development, (IRD) Georgia	Tbilisi E-mail: sellis@ird.ge	
94	Leslie Wilson	Director, Save the Children, Georgia	Tbilisi	
95	Nodar Mzhavanadze	Applicant, ritual services	Likhauri, Ozurgeti	5
96	Avtandil Salukvadze	Applicant, fish farm	Likhauri, Ozurgeti	5
97	Lia Surguladze	Applicant, nut product	Likhauri, Ozurgeti	5
98	Mamuka Alania	Applicant, cow farm	Teklati, Senaki	5
99	Nino Shavgulidze	Expert, CENN	27 Betlemi street, Tbilisi t: 751903/04 mobile: 877 742219 e-mail: nino.shavgulidze@cenn.org	3, 5
100	Beka Baramidze	PR Manager, TELASI	#3 Vani street, 6 floor, Didube, Tbilisi t: 779812	2
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103	Mzia Samadashvili	ESCA (Energy services Consumers' Associations) team member	3 Varketili, 2 micro region, 41 korpus, apt. 39, 10 th floor, Tbilisi Mob: 895585116	3
104	Manoni Khachidze	Ex-Deputy Minister of Health and Social Protection (now HR Manager, Social Service Agency).	51 Javakhishvili street, 3 rd floor, Tbilisi Mob: 891 919006	3
105	Gela Chiviashvili	Manager of Social Program Department, Social Service Agency	51 Javakhishvili street, 3 rd floor, Tbilisi Mob: 899 183918	3

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Annex 6: GWHAP Conclusions from Impact Evaluation of GWHAP

In 2004, a unit of PA Consulting, “Market Analytics,” a survey research unit of PA Government Services, Inc conducted an impact evaluation. Some important parts of their conclusions are repeated here, as background for interested readers.

“The analyses of qualitative and quantitative data consistently reveal the importance of the Georgia Winter Heating Assistance Program. GWHAP has played a critical role in the lives of individuals as well as critical social institutions over the past six years. Clearly there is a need for a winter heating assistance program of some kind in the social safety net for vulnerable Georgians.”

Some of the reports significant conclusions are given, below:

- *GWHAP serves households that include the most vulnerable groups in Georgia.*
- *GWHAP deters households from using less desirable fuels as a primary or secondary source of heat.*
- *GWHAP plays an important role in the larger economy and energy sector. Distribution companies must continue to increase collection rates in order to operate and purchase power, as well as fund their infrastructure needs. In turn, these activities help to stabilize the supply of energy into Georgia. Many households and institutions will be disconnected in the absence of support from GWHAP with concomitant decreases in collection.*
- *Targeting remains a significant challenge. GWHAP beneficiaries include among the most vulnerable groups in Georgia, but many others who are equally poor do not receive assistance.*
- *A winter heating assistance program will not be implemented without the assistance of donor funds and support. [T]he Government of Georgia is not prepared to implement a winter heating assistance program for vulnerable households and social institutions that are not already covered by their existing programs. Advancement in this area will require serious and sustained commitment among the relevant GoG agencies, and substantial investment on the part of donor agencies to provide funds for beneficiaries, technical support, and training.*

Annex 8: Summary of business plans

GESI, Task 5

1. Kekhidjvari, Kareli Region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	<i>Findings</i>
1.	Besik Bankanashvili	Production of cardboard boxes	Start up	US\$ 62,000.0	-	
2.	Zurab Bankanashvili	Holiday Complex	Start up	US\$ 13,000.0	-	
3.	Zurab Gochashvili	Computer Games	Start up	US\$ 1,200.0	-	
4.	Mediko Totladze	Production of dried fruits	Start up	US\$ 3,000.0	-	
5.	Vaja Tinikashvili	Production and processing of crops and livestock products	Sole Proprietor	US\$ 5,000.0	-	
6.	Khvtiso LomitaShvili	Flowers greenhouse	Sole Proprietor	US\$ 1,500.0	-	
7.	Ilia Evstapishvili	Mushroom greenhouse	Start up	US\$ 5,300.0	-	
8.	Soso Lomitashvili	Flowers greenhouse	Start up	US\$ 5,200.0	-	
9.	Khvicha Busishvili	Flowers greenhouse	Start up	US\$ 5,250.0	-	
10.	Paata Lomitashvili	Production of Wafer	Start up	US\$ 3,400.0	-	
11.	Gela Baliashvili	Service of Irrigation System	Start up	US\$ 1,300.0	-	
12.	Kekhidjvari Ltd.	Wood processing and mill	Limited Liability Comp	US\$ 10,000.0	-	

13.	NGO "Dzama"	Hydro Power Plant	NGO	US\$ 91,500.0	US\$ 91,500.0	
14.	NGO "Dzama"	Building of the gas distribution pipe system	NGO	US\$ 62,850.0	US\$ 62,850.0	
	Total			US\$ 270,500.0	US\$ 154,350.0	

2. Nergeeti, Bagdadi Region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	<i>Findings</i>
1.	Jora Maisuradze	Bakery		2,500.0	-	
2.	Mamuka Maisuradze	Cable TV		9,500.0	-	
3.	Iuri Maisuradze	Production of timber		9,000.0	-	
4.	Gocha Maisuradze	Fish breeding farm		2,450.0	-	
5.	Iuri Chrelashvili	Limonade production		4,000.0	-	
6.	Jemal Maisuradze	Ritual service		3,000.0	-	
7.	Temur Kupradze	Soft furniture		7,500.0	-	
8.	JRC "Dvalishvili – Chubinidze – Gumberidze – Hanhes 2"	Cooling warehouse		24,492.0	-	
9.	Zaur Chubinidze	Greenhouse		9,250.0	-	

10.	JSC "Hanhesi 2"	Hydro Power Plant		124.200.0	124.200.0	
	Total			195,892.0	124.200.0	

3. Likhauri, Ozurgeti Region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Badri Toidze	Fish farm	Start up	US\$ 2,000.0	-	
2.	Nodar Tsetsxladze	Soft furniture	Start up	US\$ 1,800.0	-	
3.	Givi Chelidze	Auto service	Start up	US\$ 4,000.0	-	
4.	Gela Chkhatarashvili	Mixed fodder production	Start up	US\$ 7,100.0	-	
5.	Valerian Gobronidze	Bread production	Start up	US\$ 1,000.0	-	
6.	Omar kalandarishvili	Tea production, pig farming	Start up	US\$ 3,250.0	-	
7.	LTD "Simon-Gogia"	Fish farm	Limited Liability Company	US\$ 6,500.0	-	
8.	Nodar Mzhavanadze	Ritual service	Start up	US\$ 1,400.0	-	
9.	Vazha Patarava	Wine production	Start up	US\$ 3,200.0	-	
10.	Avtandil Salukvadze	Fish farm	Start up	US\$ 1,950.0	-	
11.	Lia Surguladze	Nut production	Start up	US\$ 2,800.0	-	

12.	Levan Vashakmadze	Micro sawmill factory	Start up	US\$ 2,950.0	-	
13.	Tengiz Tsetskhladze	Auto service	Start up	US\$ 2,000.0	-	
14.	Izabela Gordeladze	Pig farm	Start up	US\$ 2,000.0	-	
15.	David Shilakadze	Fish farm	Start up	US\$ 3,000.0	-	
16.	Karlo Urushadze	Tea production	Start up	US\$ 5,000.0	-	
17.	Merab Girkvelidze	Ritual Service	Start up	US\$ 3,200.0	-	
18.	Vaja Chanishvili	Food production	Start up	US\$ 3,700.0		
19.	Makvala Salukvadze	Pig farm	Start up	US\$ 2,800.0	-	
20.	“Achi HPP”	Hydro Power Plant	NGO Likhauri	US\$ 178,000.0	US\$ 178,000.0	
	Total			US\$ 237,650.0	US\$ 178,000.0	

4. Teklati, Senaki Region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	LTD ‘Nikora’	Cow farm	Limited Liability Company	US\$ 10,000.0	-	
2.	LTD ‘Khorgishi’	Cow farm	Limited Liability Company	US\$ 10,000.0	-	
3.	Badri Garuchava	Milk production	Start up	US\$ 2,000.0	-	
4.	Temur Gvaramia	Cable TV	Start up	US\$ 9,500.0	-	

5.	Guram Kirtava	Ritual service	Start up	US\$ 6,500.0	-	
6.	Teklati CBO	El.network upgrade	CBO	US\$ 10,930.0	US\$ 10,930.0	
	Total			US\$ 48,930.0	US\$ 10,930.0	

5. Agara, Ambrolauri region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Michael Abutidze	Ritual Service	Start up	US\$ 2,350.0	-	
2.	Jiruni Abutidze	Potato growing	Start up	US\$ 4,600.0	-	
3.	Soso Turdzeladze	Limonade and Bread production	Start up	US\$ 5,300.0	-	
4.	Paata Meskhi	Fish farm	Start up	US\$ 5,500.0	-	
	Total			US\$ 17,750.0	-	

6. Ratevani, Bolnisi region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Marina Debnozashvili	Beauty Saloon	Start up	US\$ 10,000.0	-	
2.	Avtandil Grdzlishvili	Car Repairing	Start up	US\$ 4,000.0	-	

3.	Nodari Ekizashvili	Car Washing	Start up	US\$ 3,000.0	-	
4.	Giorgi Lomsadze	Cheese Production	Start up	US\$ 4,300.0	-	
5.	Bela Berdzenadze	Cheese Production	Start up	US\$ 2,000.0	-	
6.	Malkhaz Eradze	Farm	Start up	US\$ 38,000.0	-	
7.	Nana Devnozashvili	Oil Production	Start up	US\$ 30,000.0	-	
8.	Lali Bejanishvili	Sawing workshop	Start up	US\$ 3,000.0	-	
9.	Tamaz Chomakhishvili	Wine Production	Start up	US\$ 55,000.0	-	
10.	"Pheri Ltd."	Hydro Power Plant	Limited Liability Company	US\$ 197,000.0	-	
	Total			US\$ 346,300.0	-	

7. Tamariani, Lagodekhi region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	David Matiasvili	Production of Spirt	Start up	US\$ 10,000.0	-	
2.	Levan Putkaradze	Shop 1	Start up	US\$ 8,000.0	-	
3.	Valeri Gvaramadze	Shop 2	Start up	US\$ 6,000.0	-	
4.	Zura Putkaradze	Pickles Production	Start up	US\$ 10,000.0	-	
5.	Jemal Meskhishvili	Oil Production	Start up	US\$ 15,000.0	-	

6.	Michael Kvernadze	Mill	Start up	US\$ 6,000.0	-	
7.	Iliko Kirvalidze	Milk Production	Start up	US\$ 5,000.0	-	
8.	Leri Midelauri	Meat Processing	Start up	US\$ 6,000.0	-	
9.	Badri Khachidze	Vegetable Greenhouse	Start up	US\$ 50,500.0	-	
10.	NGO "Tamariani"	Hydro Power Plant	NGO	US\$ 92,700.0	US\$ 92,700.0	
	Total			US\$ 209,200.0	US\$ 92,700.0	

8. Breti, Kareli region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Ale Titvinidze	Tseretso Production	Start up	US\$ 7,500.0	-	
2.	Dato Kapanadze	Mill	Start up	US\$ 29,000.0	-	
3.	Spartak Titvinidze	Farm	Start up	US\$ 49,050.0	-	
4.	Koba Titvinidze	Construction Brick	Start up	US\$ 8,830.0	-	
5.	Alexander Edilashvili	Chicken farm 1	Start up	US\$ 20,000.0	-	
6.	Nazi Takadze	Chicken farm 2	Start up	US\$ 20,150.0	-	
7.	Jemal Beridze	Bakery	Start up	US\$ 4,000.0	-	
8.	Levan Imerlishvili	Computers	Start up	US\$ 3,650.0	-	
9.	Nato Guliashvili	Incubator	Start up	US\$ 8,750.0	-	

10.	Otar Titvinidze	Sheep farm	Start up	US\$ 12,000.0	-	
11.	“Breti Gas Ltd.”	Building of the gas distribution pipe system	Limited Liability Company	US\$ 168,600.0	-	
	Total			US\$ 331,530.0	-	

9. Pshaveli, Telavi region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Burdiashvili Tamaz	Bakery	Sole Proprietor	US\$ 4,000.0	-	
2.	Mchedlishvili Vladimer	Comuter center	Start up	US\$ 3,000.0	-	
3.	Garalashvili Aleko	Grocery	Sole Proprietor	US\$ 4,000.0	-	
4.	Ramazashvili Vakhtang	Gas station	Sole Proprietor	US\$ 7,000.0	-	
5.	Shatirishvili Levan	Cheese production	Sole Proprietor	US\$ 5,000.0	-	
6.	Archemashvili Soso	Sunflower processing	Sole Proprietor	US\$ 6,000.0	-	
7.	Chincharashvili Givi	Mill	Sole Proprietor	US\$ 7,000.0	-	
8.	JRC “Robizon & Co”	Wood processing	JRC	US\$ 12,000.0	-	
9.	Tsikhistavi Nino	Medical service	Start up	US\$ 10,000.0	-	
10.	Kazbegi Pshaveli Forest Ltd.	Hydro Power Plant	Limited Liability Company	US\$ 92,500.0	US\$ 92,500.0	
11.	“Mariami 91 Ltd.”	Bio gas	Limited Liability	US\$ 22,041.0	-	

			Company			
	Total			US\$ 172,541.0	<i>US\$ 92,500.0</i>	

10. Spasovka, Ninotsminda Region

	<i>Applicant</i>	<i>Type of activity</i>	<i>Type of business</i>	<i>Loan required</i>	<i>Grant required</i>	
1.	Otar Vanadze	Cow farm	Start up	US\$ 17,500.0	-	
2.	Ararat Ananikian	Cow farm	Start up	US\$ 50,000.0	-	
3.	Levan Vanadze	Cow farm	Start up	US\$ 10,000.0	-	
4.	Akaki Vanadze	Cow farm	Start up	US\$ 10,000.0	-	
5.	Onise Nakaidze	Milk production	Start up	US\$ 30,000.0	-	
6.	Nodar Mekeidze	Shop	Start up	US\$ 20,000.0	-	
7.	Misha Beridze	Sheep farm	Start up	US\$ 6,400.0	-	
8.	Alvard Sanosian	Sheep farm	Start up	US\$ 12,000.0	-	
9.	Merab Iremadze	Bio gas production	Start up	US\$ 5,000.0	-	
10.	LTD 'Mtis Artsivi'	Send production	Limited Liability Company	US\$ 30,000.0	-	
11.	LTD 'Spasovka'	Dairy production	Limited Liability Company	US\$ 86,400.0	-	
12.	Nodar Mekeidze	Cow farm	Start up	US\$ 15,000.0	-	

13.	Avtandil Nakaidze	Meat products	Start up	US\$ 15,000.0	-	
14.	Avtandil Vanadze	Honey production	Start up	US\$ 17,000.0	-	
15.	Badri Vanadze	Goat farm	Start up	US\$ 12,000.0	-	
16.	Piruz Vanadze	Sheep farm	Start up	US\$ 16,500.0	-	
17.	David Mekeidze	Cow farm	Start up	US\$ 15,000.0	-	
18.		Hydro Power plant		US\$ 14,140.0	US\$ 14,140.0	
	Total			US\$ 381,940.0	US\$ 14,140.0	

ANNEX 9: GESI Evaluation Team Powerpoint Presentation



Impact Evaluations of:

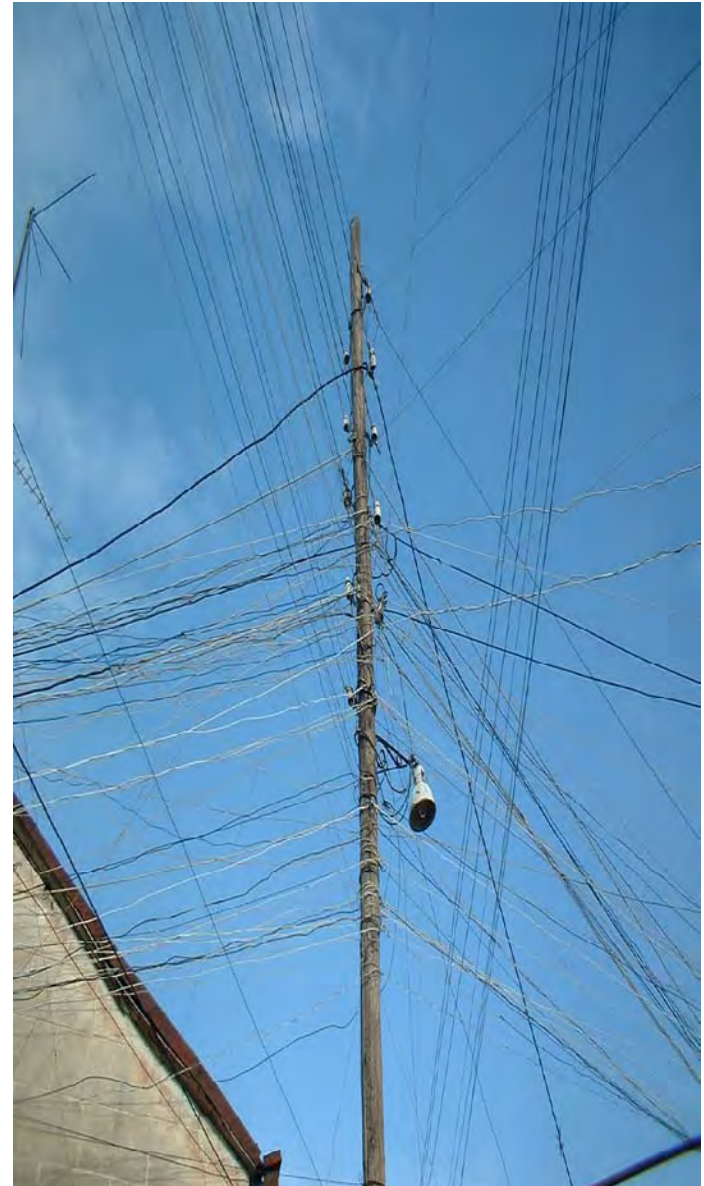
- Georgia Energy Security Initiative (GESI)
- AgVANTAGE Program
- SME Support Program

-- For USAID/Georgia
8 July, 2010










GESI Evaluation

GESI: Georgian Energy Security Initiative

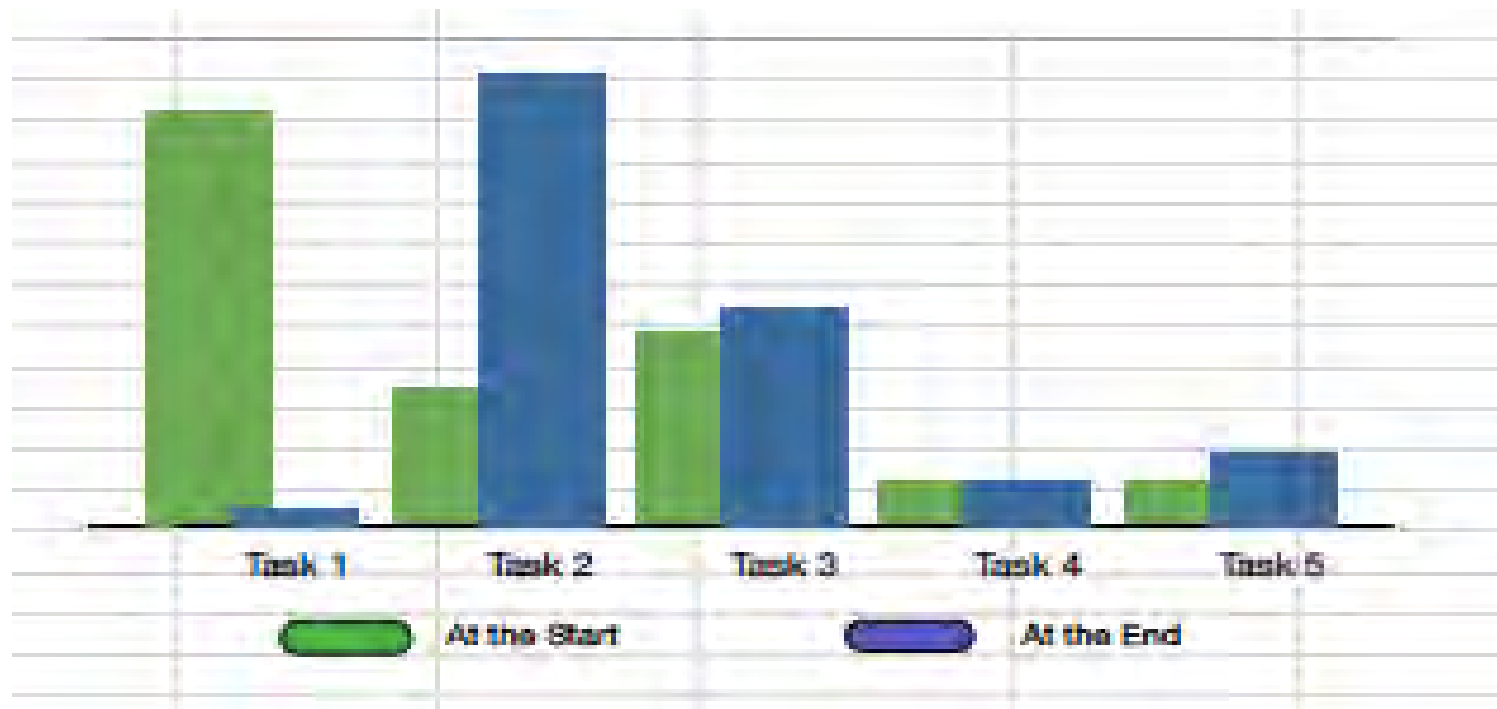
- **Life of Project...**2003 – 2007
- **Contractor:..... PA Consulting**
+ subs
- **Contract Value:** \$33 mil
- **Project objectives:** *“... designed to improve overall performance of electrical energy sector and assist parts of population underserved by it.”*



GESI: Major Components & Timelines

Task 1: <u>HPP</u> Restoration								
Task 2: <u>Electric Distribution</u> Sector Reform								
Task 3: <u>GWHAP</u>								
4: <u>Credit Facility</u>								
Task 5: <u>Community Development</u>								
								
2000	2001	2002	2003	2004	2005	2006	2007	

Planned vs Actual Expenditures



Areas visited during field travel



1 Hydropower Restoration -- Findings & Conclusions

- PA prepared time schedules, cost estimates
- USAID assessed implications
- **Problems:**
 - GoG planned to privatize many stations
 - Corruption in the energy sector
 - inability to control power generated to reach customers and to collect revenues
- USAID shifted emphasis from power production to distribution

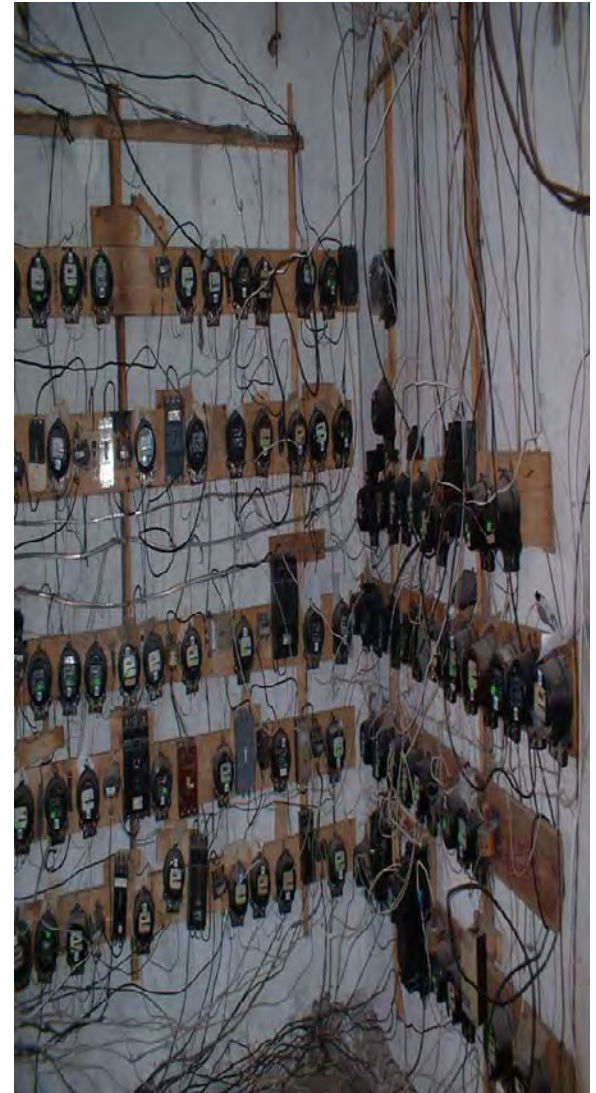
2, Electricity Distribution -- Findings & Conclusions

Findings: PA made significant progress:

- Metering, billing, collection
- Personnel Management
- Public outreach

Conclusions:

- **Impact:** Changed Corporate Culture
- **Energo-Pro** uses PA's systems
- **Utilities** collect actual costs for electricity



3 Georgia Winter Heating -- (GWHAP)-- Finding & Conclusions

Findings:

- Most of Tbilisi knows about “USAID voucher program.”
- GWHAP closely linked to Comp # 2

Conclusions:

- GWHAP -- impact positive
- Significant short-term impact at a critical time
- Helped public utilities increase revenues

4: Credit Facility - Conclusions

- Funded 20 projects; trained 30 people.
- Limited capacity developed; long-term Credit Facility stopped.
- Minor impact on improved energy supply & energy efficiency
- Loan Guarantee Program:
 - Designed for seven years; terminated after two years
- Beneficiaries now building on GESI impact

5 Community Development -- Findings & Conclusions

Findings:

- Team assessed 44% of business plans;
- 19 out of 50 were functioning. (38% success)
- All 19 were expanding, or starting additional businesses

Conclusions:

- Project helped 10 communities. (Population: 8789)
- Marginal Impact on energy production or efficiency.
- Estimated total jobs created: +/- 215.

Recommendations

USAID should consider....

- A Hedging Strategy
- Enhanced Feedback loops --expand
Monitoring & Evaluation (M & E)
- Energy conservation program
- Trade-offs: Urban vs Rural CD?
- Extension Service for SME programs

- Thank you

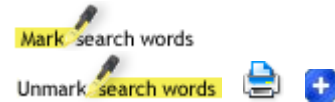


Annex 9

US Aid Cut: a Political Blow to the Government

/ 1 Oct.'03 / 18:17

Tea Gularidze, Civil Georgia



The U.S. decision to further cut the financial aid delivered yet another blow to the Georgian authorities on the eve of the November 2 parliamentary elections. Observers suggest Georgian government's poor performance and shifts in its foreign policy are to blame.

Thomas Adams, Acting Coordinator of the U.S. Assistance to Europe and Eurasia at the U.S. State Department, stated after the meeting with Georgian President Eduard Shevardnadze on September 24 that his government has decided to reduce financial assistance as the reforms in Georgia have slowed down.

He said that of the 27 countries that receive aid from his office, Georgia is near the bottom of the list.

"Georgia's neighbors are implementing their economic programs more vigorously. We call on the Georgian government to step up its fight against corruption," he added.

The aid will mainly be reduced for the rehabilitation of the power plants and other energy facilities in Georgia. However Thomas Adams said that the USA would continue to fund the USAID program, which covers the electricity costs for the socially vulnerable groups.

Georgia has been a second largest recipient of the U.S. financial assistance, second only to Israel, for many years. According to the U.S. embassy in Tbilisi, Georgia received up to USD 700 million in assistance since 1992, plus USD 376 million USAID assistance since 1996.

The U.S. official assistance to Georgia reached its peak in 2000, when Georgia received USD 108,4 million. Since then amount of the assistance has been decreasing year after year and consisted USD 83,8 million in 2003.

According to Thomas Adams exact amount of the assistance cut is to be determined early in 2004 as a group from the State Department again visits Georgia to evaluate the progress of the reforms.

President Shevardnadze in his radiobroadcast on September 29 said that Georgia will meet its commitments and hasten reforms.

"We have problems and we admit that Georgia failed to meet some of its commitments, due to our tolerance to those who did not pay their dues. But this problem will be solved and our tax recovery indications will improve. The reforms will be implemented as well," Eduard Shevardnadze said.

He said that cooperation with the U.S. will continue in the future.

Observers say that the U.S. decision to cut aid "is quite logical as Washington is disappointed with Georgia."

Ghia Nodia of the Caucasus Institute for Peace, Democracy, and Development (CIPDD) who has recently visited the United States together with other Georgian civil activists, says the United

States administration is disappointed and rather tired of Georgian government's inability to solve even the most basic problems.

"Georgians are incapable of doing something good with the internal policy and still ask for assistance from their foreign partners. Therefore Georgia's reputation is constantly decreasing," Nodia told *Civil Georgia*.

Observers also suggest that the entry of the Russian energy giants Gazprom and Unified Energy Systems of Russia to the Georgian energy market revealed shifts in the Georgia's foreign policy unfavorable to the U.S. administration.

"Shevardnadze sees that recently the United States does not provide the unconditional support to him and is inclined to support the opposition. He [Shevardnadze] uses this kind of 'blackmailing.' If you do not support me, I might change my foreign policy – this is his message," Gia Nodia says.

Experts expect that official Washington would finalize its policy towards Georgia after November 2 elections, the conduct and outcomes of which may significantly affect country's prestige and policies.

Annex 10

Success Story

An energy project wins prestigious international management award Energy Overhaul Wins Top Award



“We consider the reform of the United Energy Distribution Company to be one of the most — if not the most — important successes to date in our energy reform program,” said Alexander Khetaguri, First Deputy Minister of the Ministry of Fuel and Energy of Georgia.

Photo: PA Consulting

A USAID-sponsored reform team accepts the prestigious Platinum Award in London. From left to right: UEDC’s Chief of Staff Irakli Elashvili and General Director Dean White, First Deputy Minister of Energy Alexander Khetaguri, and UEDC Manager Mamuka Kikalishvili.

In 2003, USAID began working with the government of Georgia to transform the largest Georgian state-owned energy utility from a corrupt, inefficient operation into a trusted, efficient company. In 2006, the effort won the Platinum Award at the Management Awards in London, sponsored by the Management Consultancies Association, the industry body for management consulting firms, which organizes the awards to recognize excellence in client work. An independent panel of business figures, journalists, and academics selects the most value-adding, innovative, and successful assignments. The award was given jointly to USAID and the Government of Georgia.

The project was part of USAID’s Energy Security Initiative, which included a multi-year management contract for Georgia’s largest electric utility, the United Energy Distribution Company (UEDC). The energy company was notorious for corruption, its bloated and ineffective workforce, and poor management.

Often braving personal danger, the USAID-financed team at UEDC battled corruption throughout the company and drastically improved its performance. The company now provides customers with reliable electricity for the first time since Georgia’s independence. It is paying its taxes and its foreign energy suppliers in full and has increased employee salaries. It is also investing in improving customer service. Customer payments for electricity have even climbed from as little as 11 percent in 2003 to over 75 percent in 2006.

“We definitely appreciate the work of the UEDC management team. They took on the challenge of reforming a company that many felt was impossible to turn around... We consider the reform of the UEDC to be one of the most, if not the most, important successes to date in our energy reform program,” said Alexander Khetaguri, First Deputy Minister of Fuel and Energy of Georgia. Although further challenges lie ahead, including the company’s privatization and electricity tariff changes to name a few, the USAID-sponsored team has demonstrated the ability to rebuild a company from the ground-up, transforming it from a major cause of the country’s energy instability into a model for reform of state-owned companies.

Annex 11

Georgian Energy Crisis: Squabbles and Finger Pointing

UDC vs. Telasi, Regions vs. Center

The energy crisis existing in Georgia becomes a reason for the inter-agency contradictions and squabbles. The United Distribution Company (UDC) has requested its limits of supplied and the company began importing additional 100 megawatts from Russia in order to make up the energy deficit in the regions. There is a clear shortfall in energy supplied to Tbilisi and Telas, the distribution network, now accuses UDC of not being on top of things in the way it distributes Georgian domestic energy resources, and at the same time, the finger pointing goes both ways, and UDC accuses Telasi of exceeding the established limits.

UDC is requesting its allocated limits of supplied electricity and it is receiving 170 megawatts instead of the 350 megawatts quota that was earlier determined for the UDC, thus a 180 megawatts deficit is created. “We import 250 megawatts from Russia and Armenia during the peak demand hours, however the imported electric energy does not reach our customers – it is supplied to the Tbilisi energy distribution company Telasi and Abkhazia, therefore the quota system that allocates electricity is violated,” – explained Nika Laliashvili, a representative of PA Consulting group only yesterday. The discrepancy makes it impossible for UDC to often to not be able to provide electricity to strategic important objects. “We understand that Tbilisi is a priority, however, that understanding does not mean that the people in Chokhatauri should not have any electricity at all,” added Laliashvili.

The fact that happened in Imereti yesterday could serve as one of the clear examples of the existing deficit. The local residents of Tkibuli protested over the lack of energy in front of the UDC Tkibuli service center building. The protestors told how it has already been a month and that they are supplied with electricity from 2am to 4am each morning. Already the pressure is on to do something over this situation. Yesterday, according to information shared by UDC, it has requested that 100 additional 100 megawatts of electric energy be taken from Russia. “This energy will be then be used for the regions,” stated Laliashvili.

Now it also looks as if Telasi will also have to make arrangements to import additional energy from outside of Georgia. There is currently a 40 megawatts shortfall in Tbilisi. As it stands now, the electric distribution network for the capital cannot even be supplied with the already restricted limits set by the UDC. And because of the deficit situation, Telasi is now turning off the electricity parts of Tbilisi for three hours blocks, which last until till 7 o’clock in the evenings. Telasi describes the worsening of the energy supply for Tbilisi to the insufficient distribution of the country’s domestic energy resources by the UDC during the winter season.

Notwithstanding the truth or other factors, UDC responded to the accusations of Telasi, and said, “ The Tbilisi energy Distribution Company exceeds the limits set by the market and is using considerably more electric energy than it claims. If Telasi continues the same pattern, then all the reserve resources that exist in the system will used up in a week and then it will have to import electric energy.”