



USAID
FROM THE AMERICAN PEOPLE



ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT STRATEGIES (EC-LEDS) CLEAN ENERGY PROGRAM

COOPERATIVE AGREEMENT NO. 114-A-13-00008

YEAR THREE ANNUAL PROGRESS REPORT

OCTOBER 1, 2015 – SEPTEMBER 26, 2016



October, 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Winrock International under Cooperative Agreement No. 114-A-13-00008.

**ENHANCING CAPACITY FOR LOW EMISSION
DEVELOPMENT STRATEGIES (EC-LEDS)
CLEAN ENERGY PROGRAM**

YEAR THREE ANNUAL PROGRESS REPORT

October 1, 2015– September 26, 2016

TABLE OF CONTENTS

| | |
|--|-----|
| ACRONYMS..... | ii |
| I. EXECUTIVE SUMMARY..... | i |
| II. YEAR THREE PROGRAM HIGHLIGHTS | i |
| A. FINALIZATION OF SUSTAINABLE ENERGY ACTION PLANS (SEAPS)..... | 1 |
| B. MUNICIPAL INVENTORY, PROJECTION, AND MITIGATION PLANNING (MUNI-EIPMP) | 1 |
| C. COMPONENT 3. DEVELOPMENT OF 4 CHAPTERS FOR LEADS DOCUMENT | 2 |
| D. EC-LEDS PARTIAL GRANTS PROGRAM | 3 |
| E. DEVELOPMENT CREDIT AUTHORITY GUARANTEES AND FINANCIAL INSTITUTION ASSISTANCE | 3 |
| F. EMPOWERING THE NEXT GENERATION THROUGH OUTREACH..... | 3 |
| G. PUBLIC SERVICE ANNOUNCEMENTS SPREADING THE GOOD NEWS OF ENERGY EFFICIENCY..... | 3 |
| H. ENERGY EFFICIENCY FOR YOUTH..... | 4 |
| I. ENERGY EFFICIENCY FOR YOUTH AND PERSONS WITH DISABILITIES (PWD) | 4 |
| J. EC-LEDS ON SOCIAL MEDIA..... | 4 |
| K. COMMUNITY-BASED SOCIAL MARKETING - POPULARIZATION OF RENEWABLE ENERGY TECHNOLOGIES..... | 4 |
| III. ACTIVITIES COMPLETED DURING YEAR THREE | 4 |
| A. COMPONENT ONE: GEORGIAN MUNICIPAL ENERGY EFFICIENCY (GEMUNEE)..... | 4 |
| B. COMPONENT THREE: NATIONAL EC-LEDS WORKING GROUP AND ADVISORY ASSISTANCE | 13 |
| IV. CAPACITY BUILDING AND TECHNICAL ASSISTANCE TO GOG..... | 16 |
| A. ENVIRONMENTAL PROTECTION ACTIVITIES..... | 20 |
| B. CROSS-CUTTING ACTIVITIES | 20 |
| C. PROJECT ADMINISTRATION..... | 27 |
| C. YEAR FOUR IMPLEMENTATION PLAN | 28 |
| D. DELIVERABLES AND PRODUCTS SUBMITTED DURING YEAR THREE..... | 29 |
| E. LESSONS LEARNED..... | 32 |
| IV. PROGRAM PROGRESSTOWARD INDICATORS | 33 |
| ANNEX 1: SUCCESS STORY | 62 |
| ANNEX 2: MEDIA PLAN OF AIRING EC-LEDS EE PSAS ON NATIONAL TV CHANNELS | |
| 64 | |
| ANNEX 3: MEDIA COVERAGE REPORT (NOVEMBER, 2015 – OCTOBER, 2016)..... | 65 |
| ANNEX 4: YOUTH ENERGY EFFICIENCY EVENTS..... | 96 |
| ANNEX 5: PWD YOUTH ENERGY EFFICIENCY EVENT | 102 |

Acronyms

| | |
|------------|---|
| BAU | Business as usual |
| BEO | Bureau Environmental Officer |
| BREEAM | Building Research Establishment Environmental Assessment Method |
| CA | Condominium Associations |
| CC | Climate Change |
| CE | Categorical exclusion |
| COM | Covenant of Mayors |
| COP | Chief of Party |
| DCA | Development Credit Authority |
| DCOP | Deputy Chief of Party |
| DWG | Decision Ware Group |
| EA | Environmental assessment |
| EC | European Commissions |
| EC-LEDS | Enhancing Capacity for Low Emission Development Strategies |
| EE | Energy efficiency |
| EEC | Energy Efficiency Center |
| EIPMP | Emission Inventory, Projection, and Mitigation Planning |
| EMMP | Environmental Monitoring and Mitigation Plan |
| EPI | Economic Prosperity Initiative |
| ERN | European Regional Network |
| EU | European Union |
| EWG | Expert Working Group |
| FFC | Fast Forward Communications |
| GB | Green building |
| GBCWG | Green Building Certification Working Group |
| GBCG | Green Building Council Georgia |
| GDP | Gross Domestic Product |
| GeMunee | Georgian Municipal Energy Efficiency |
| GHG | Greenhouse gases |
| GOG | Government of Georgia |
| HPEP | Hydropower Policy and Energy Planning |
| HQ | Head Quarters |
| ICMA | International Capital Market Association |
| IEE | Initial Environmental Examination |
| INRMW | Integrated Natural Resource Management in Watersheds of Georgia |
| JRC | Joint Research Centre (of the EU) |
| LED | Low emission development |
| LEDS | Low Emission Development Strategy(ies) |
| MDF | Municipal Development Fund |
| MENRP | Ministry of Environment and Natural Resources Protection |
| MOE | Ministry of Energy |
| MOE-AD | Ministry of Energy Analytical Department |
| MRV | Monitoring, Reporting and Verification |
| Muni-EIPMP | Municipal Inventory, Projection and Mitigation Planning |
| NAMA | Nationally Appropriate Mitigation Actions |
| NATELI | New Applied Technology Efficiency and Lighting Initiative |
| NDC | Nationally Determined Contribution |

| | |
|-------------|--|
| NEO | New Economic Opportunities |
| NGO(s) | Non-Governmental Organization(s) |
| PEA | Programmatic Environmental Assessment |
| PMP | Performance Monitoring Plan |
| PPP | Public private partnerships |
| PSA | Public Service Announcement |
| PWD | People with Disabilities |
| RE | Renewable energy |
| RFA | Request for Applications |
| RFP | Request for Proposals |
| RS | Rating systems |
| RSERC | Regional Sustainable Energy Resource Centers |
| SC | Steering Committee |
| SDAP-Center | Sustainable Development and Policy Center |
| SEAP | Sustainable Energy Action Plan |
| SEO | Sustainable Energy Office |
| SC | Steering Committee |
| SS | Scoping statement |
| SUDeP | Sustainable Urban Demonstration Projects |
| SWG | Sub working group |
| TOR | Terms of Reference |
| UN | United Nations |
| USAID | United States Agency for International Development |
| USG | United States Government |
| WWF | World Wide Fund for Nature |

I. EXECUTIVE SUMMARY

The United States Agency for International Development (USAID) Georgia’s Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program is a four-year (September 27, 2013 – September 26, 2017) effort which supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy, which focuses on three activities:

- 1) Georgian Municipal Energy Efficiency (GeMunee);
- 2) Green Building (GB) Rating and Certification System; and
- 3) National EC-LEDS Working Group and Advisory Assistance.

The EC-LEDS Clean Energy Program, funded by USAID/Caucasus, is being implemented by Winrock International (WI). The EC-LEDS Clean Energy Program supports increased climate change mitigation by building municipal capacity in climate change mitigation measures and raising public awareness; increasing private sector investment in energy efficiency (EE) and Green Building (GB); and strengthening the Government of Georgia (GOG) capacity to develop and implement a national Low Emission Development Strategy (LEDS) in support of the United States Government (USG) EC-LEDS initiative. The broader goal is to enable more responsible management and development of Georgia’s natural endowments.

During its four years, the EC-LEDS Clean Energy Program is expected to reduce greenhouse gas (GHG) emissions in Georgia by at least 236,372.9 metric tons of CO₂equivalent¹, facilitate up to \$14 million in private sector investments in clean energy, and lead to energy savings of up to 315 GWh (the equivalent of approximately \$22 million). This report represents the third annual report for the EC-LEDS Clean Energy Program, covering the period of October 1, 2015 through September 30, 2016.

II. YEAR THREE PROGRAM HIGHLIGHTS

A. Finalization of Sustainable Energy Action Plans (SEAPS)

By the end of year three (Oct. 2015- Sept. 2016), EC-LEDS finalized 10 SEAPs for the Covenant of Mayors (COM)-signatory self-governing units, among them, eight cities and two municipalities. Those self-governing units are: Tbilisi, Batumi, Kutaisi, Zugdidi, Gori, Telavi, Akhaltsikhe, Mtskheta, Temi Telavi Municipality, and Bolnisi Municipality. EC-LEDS also developed Monitoring, Reporting, and Verification (MRV) plans for each SEAP document as well as one technical project proposal (on a selected mitigation action) per each self-governing unit.

In addition to SEAP documents, the EC-LEDS project provided technical support for the development of a monitoring report for Tbilisi SEAP document (2009-2013).

B. Municipal Inventory, Projection, and Mitigation Planning (Muni-EIPMP)

EC-LEDS finalized the development, testing, and revision of the Muni-EIPMP analytical tool based on experience and lessons learned during the development of SEAP documents for different self-governing units.

¹ Request on new targets has been communicated with USAID/Caucasus and final targets will be assigned after USAID’s response.

C. Component 3. Development of 4 chapters for LEDS Document

Throughout year three the chapters on Energy, Transportation, Buildings, and Industry sectors were prepared for inclusion in the final and full LEDS document. In particular, the process for each sector implied the preparation of the following:

- sectoral overview consisting of a description of the sector, latest and future trends of sector development, baseline GHG emission, reference scenario by 2030, and identification of main drivers of GHG emission trend;
- mitigation measures per sector developed and assessed on GHG reduction; and
- sectoral LEDS strategy for 2030.

All sections of the chapters, particularly the potential mitigation measures, were presented, discussed and agreed with the Sectoral Working Groups during the working groups meetings. Agreed mitigation measures were put in the MARKAL-Georgia analytical tool and overall emissions reduction per sector assessed. In particular, the below figures represent the 2030 GHG emission and energy consumption reduction contributions by sector:

- In energy sector – reduction of primary energy consumption by 5.0%, and of gas import – by 12.7% corresponding with 2,539Gg emissions reductions by 2030;
- In building sector - reduction of primary energy consumption by 5.3% compared to the BAU scenario, and the final energy-by 6.4%, while the import of energy carriers is reduced by 5.8% (import of natural gas – by 9.4%). The electricity generation decreases by 2,600 GWh (1.4%), consequently demanding 500 less installed capacity of power plants in comparison with the baseline (BAU) scenario. Correspondingly, emission reduction from the building sector will contribute with the annual saving of 846 Gg CO₂ eq. by 2030;
- In the industry sector – reduction of primary energy by 2.3%, final energy – by 2.7%, import of energy carriers by 1.7%. Energy generation is decreasing by 455GW (1.4%), which is why 90 MW less power plant installed capacity will be required compared to the BAU. Correspondingly, overall reduction of GHG emissions in the industry sector will be 641.3 Gg CO₂eq from burnt fuel per year by 2030;
- In transport sector - measures by 2030 reduce projected primary energy consumption by 20.6 PJ (5.0%), final energy consumption by 20.9 PJ (6.9%) and imported fuel consumption by 22.7 PJ (8.5%) corresponding with the reduction of 1,517 gg CO₂ equivalent emissions annually by 2030.

In addition to sectoral LEDS chapters, the MARKAL-Georgia Guidebook was prepared.

The Climate Change office of the Ministry of Energy and Natural Resource Protection (MoENRP) was regularly informed and updated on the development of MARKAL Georgia and received detailed clarifications on the main findings and results from EC-LEDS.

The MoENRP and the Climate Change (CC) office also requested and received EC-LEDS' assistance for preparing the information and materials for major international events in the field of climate change and the related mitigation options.

EC-LEDS intensified its work with the Sub Working Groups (SWGs) and arranged all four energy related SWGs working meetings. The SWGs received detailed information regarding their relevant sectors and had intensive and fruitful discussions with EC-LEDS.

At the follow-up of the meetings, SWG members provided their feedback, which was further analyzed and sorted out before inclusion in the LEDS document.

EC-LEDS, alongside governmental bodies and ministries - the main stakeholders of the LEDS process - worked intensively with Tbilisi City Hall and provided consultancy services in the field of clean transportation.

EC-LEDS was actively involved in the work of all major International projects, training and programs, including Georgia's First Biennial Update Report (FBUR) to the UNFCCC, managed by UNDP.

D. EC-LEDS partial grants program

EC-LEDS, through its partial grants program, initiated and implemented eleven demonstration projects in 10 municipalities:

- Akhaltsikhe –to be completed in year four
- Batumi– two projects, completed
- Bolnisi– completed
- Kutaisi – completed
- Mtskheta – to be completed in year four
- City of Telavi – completed
- Telavi Temi – completed
- Rustavi – completed
- Tbilisi – completed
- Zugdidi – completed

EC-LEDS contributed USD 456,579² to these projects and managed to secure a total leverage of over USD 5,260,000.

E. Development Credit Authority Guarantees and Financial Institution Assistance

EC-LEDS assisted Tbilisi City Hall in addressing one of the highest priority sectors in its SEAP – the transport sector, by suggesting the municipality should obtain financing from the Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P) for the municipal bus fleet replacement project. EC-LEDS presented information about the fund to the City Hall's Economic Affairs office and arranged a meeting between the City Hall and one of the E5P partner banks – EBRD. As a result of this effort, a successful cooperation emerged between the two parties. The EBRD provided an extension to a sovereign loan of up to EUR 27 million to Georgia to be on-lent to the City of Tbilisi for the benefit of the Tbilisi Transport Company Ltd, a municipal company which operates buses and the metro in Tbilisi. The project is co-financed by a capital grant of EUR 7 million from the E5P. As a result, Tbilisi will procure 143 new environmentally-friendly, compressed natural gas (CNG) low-floor buses.

F. Empowering the Next Generation through Outreach

The finale of Energy Week 2015 was a students' architectural contest, "Best Coursework Design" organized by the Energy Efficiency Center (EEC). EC-LEDS offered an award for the Best Green Design 2015. The prize and certificate were awarded to MA student Tamar Benashvili of the Georgian Technical University for "The Best Theoretical Analysis of Energy Efficiency Principles."

G. Public Service Announcements Spreading the Good News of Energy Efficiency

EC-LEDS released a total of eight PSAs, aired on local television. These short animated films gave the audience fun and easy ways to remember examples of energy efficient facts along with dos and don'ts for economizing energy.

² EC-LEDS received a modification on September 26, 2017 which amended the total grant amount to be dispersed.

H. Energy Efficiency for Youth

During year three, EC-LEDS continued to empower youth through training in energy efficiency and renewable energy technologies. A total of 378 students have participated in an EC-LEDS seminar on energy efficiency and renewable energy in the municipalities of Georgia.

I. Energy Efficiency for Youth and Persons with Disabilities (PWD)

EC-LEDS conducted information sessions on energy efficiency and renewable energy for PWDs to provide them with equal opportunities to enjoy the benefits of energy efficient behavior. These seminars empower them through training and education. EC-LEDS also produced flyers with Braille print for the blind and subtitles on videos for the deaf.

J. EC-LEDS on Social Media

EC-LEDS public outreach and communications campaign was supported by Facebook page “Energy Efficiency Is a Smart Choice” with a total of 4,359 likes.

K. Community-Based Social Marketing - Popularization of Renewable Energy Technologies

EC-LEDS produced two Solar Trees as part of its Community-Based Social Marketing campaign (CBSM) and installed them in Kutaisi and Zugdidi to promote awareness, understanding, and adoption of renewable energy.

III. ACTIVITIES COMPLETED DURING YEAR THREE

A. Component One: Georgian Municipal Energy Efficiency (GeMunee)

i. Background

In 2008, the European Union (EU) launched the Covenant of Mayors (COM) to endorse and support local governments in implementing sustainable energy policies. Cities and local authorities that want to join, or become signatories to the COM, must follow certain steps and take certain actions. For example, signatories must create an inventory to quantify greenhouse gas (GHG) emissions, develop a Sustainable Energy Action Plan (SEAP), and establish a Sustainable Energy Office (SEO) or regional Sustainable Energy Resource Center. Thirteen self-governing units (cities and municipalities) are currently signatories in Georgia: Batumi, Gori, Kutaisi, Rustavi, Tbilisi, Zugdidi, Akhaltsikhe, Telavi City, Telavi Municipality, Mtskheta City, Tianeti, Bolnisi, and Kazbegi Municipalities. The first city to become a signatory in Georgia, Tbilisi, developed and submitted its SEAP in 2011.

The EC-LEDS Clean Energy Program, through the GeMunee component, built on USAID’s support for Tbilisi and expanded its assistance to nine other CoM signatory municipalities.

Assistance to the municipalities included, but not limited to:

- Development and implementation of SEAPs;
- Establishment of Sustainable Energy Offices or Regional Sustainable Energy Resource Centers;
- Development of Monitoring/Reporting/Verification Plans;
- Development of Sustainable Energy Public Awareness Plans;
- Identification and implementation of Demonstration Projects via Partial Grants; and
- Development Credit Authority Guarantees and Financial Institution Assistance.

ii. *Selection of priority municipalities and Development of SEAPS*

In January 2014, EC-LEDS representatives visited 15 municipalities and used the municipality evaluation criteria approved by USAID under the EC-LEDS year one Work Plan to evaluate and prioritize municipalities. Municipalities were assessed according to the criteria below:

Table I: Criteria Used to Assess Municipalities

| Selection Criteria | | Weight of criteria |
|--------------------|--|---|
| 1 | CoM Signatory city/municipality or strong intention to join COM | 10 |
| 2 | Projected increase in GHG emissions because of economic or population growth | 7 |
| 3 | Willingness of a municipality to address emissions through facilitation and implementation of energy efficiency improvements | 8 |
| 4 | Willingness of a municipality to cooperate with the EC-LEDS Clean Energy Program | If the municipality does not express willingness to cooperate with the EC-LEDS program, it is automatically excluded. |
| 5 | Willingness of the municipality to contribute with human resources | 9 |
| 6 | Annual expenditure in a municipality for infrastructure improvements or construction | 10 |
| 7 | Total population within the municipality | 5 |
| 8 | Annual energy consumption in municipality (if known) | 4 |

During the first quarter of year three, EC-LEDS updated the list of potential municipalities for development of SEAPs according to the criteria agreed and adopted during year one of the program. EC-LEDS conducted face-to-face meetings, as well as online consultations with the representatives of potential municipalities. Based on the results of those meetings and consultations with key stakeholders, the EC-LEDS team decided that Bolnisi Municipality, Temi Telavi municipality, and City of Mtskheta would receive assistance during year three of the EC-LEDS program.

After identifying the municipalities, the project began planning the communication strategy with municipality focal points in order to initiate local-level data gathering and all other steps necessary for SEAP development.

iii. *High-Level Summary of SEAPs and Monitoring Reports Development by Municipality*

In year three, EC-LEDS continued support to three municipalities in SEAP development. A high-level summary per municipality is provided below. Please see the following section for further details:

- **Bolnisi Municipality** (One of four municipalities ranked as priority according to adopted evaluation criteria)
 - Technical support and overall guidance in the development of SEAP document together with MRV plan. The following sectors were covered: buildings, transport, street lighting, green areas, waste, and agriculture
 - Expert support for development of a technical project proposal for a selected mitigation action/measure;
 - Support in the development of SEAP Communications Strategy.

- **Temi Telavi Municipality** (One of four municipalities ranked as priority according to adopted evaluation criteria)
 - Technical support and overall guidance in the development of SEAP together with MRV plan. The following sectors were covered: buildings, transport, street lighting, green areas, waste, and agriculture;
 - Expert support for development of a technical project proposal for a selected mitigation action/measure;
 - Support in the development of SEAP Communications Strategy.

- **Mtskheta City Hall** (One of four municipalities ranked as priority according to adopted evaluation criteria)
 - Technical support and overall guidance in the development of a SEAP document, together with a MRV plan. The following sectors were covered: buildings, transport, street lighting, green areas, and waste;
 - Expert support for development of a technical project proposal for a selected mitigation action/measure;
 - Support in the development of SEAP Communications Strategy.

iv. *Detailed Information Regarding Priority Ranked Municipalities' SEAP-Related Accomplishments*

I. **Bolnisi Municipality** :

In the beginning of year three, Remissia visited Bolnisi municipality and met with local experts and the SEAP coordinator to provide technical details of SEAP development and instruct locally hired sectoral experts. After the meeting, the local experts together with the SEAP coordinator and representatives of different units of the municipality, started the data collection process on information related to energy consumption in sectors such as transport, buildings, street lighting, waste, green areas, and agriculture. The processes turned out to be challenging as the information required was not easy to identify, access or analyze by locals. However, with the guidance and supervision from Remissia's technical team, all necessary data was collected and analyzed accordingly. Remissia's technical team worked with local experts online and through physical meetings. One of the working meetings was conducted at Bolnisi Municipality with participation of the representatives of different Units and Services (Head of Infrastructure Unit, Head of Ltd. "Municipal Transport of Municipality etc.) and local experts who were hired to support the data gathering process locally. At the end of the working meeting, the Municipality representatives identified a considerable number of mitigation actions to be included in the SEAP document. The Remissia expert team met with local farmers at Bolnisi Municipality and representatives of the Agriculture Agency to identify potential entry points for CO₂ emission reduction in the agriculture sector through SEAP mitigation actions and identify possible project ideas for further development.

At the end of this working process, the Georgian version of Bolnisi Municipality SEAP was finalized and later translated into English. In parallel to developing the SEAP document, Remissia provided technical support in the development of a detailed technical proposal on one of the mitigation measures identified during the working process. Since it was the first time working on an entire municipality level, the working process took more effort and longer time to be finalized. The Bolnisi SEAP was accompanied with the MRV Plan and communication strategy.

2. Temi Telavi Municipality:

Similar to the Bolnisi Municipality SEAP, the working process on Temi Telavi SECAP (Sustainable Energy and Climate Action Plan) started with working meetings with the SECAP coordinator and local experts to discuss technical details, methodology and timetable. It should be noted that Temi Telavi Municipality is the only Georgian Municipality that signed a revised version of the Covenant of Mayors initiative that implies the reduction of CO₂ emissions by 40 % by 2030. After the first working meeting, the local experts in collaboration with SECAP coordinator and representatives of different units of the municipality started to collect and analyze relevant data and information on a regular basis. Despite the complicated data gathering process in Temi Telavi, the knowledge, experience, and good personal contacts of the SECAP coordinator within the municipality made the process relatively easy to handle.

At the end of the working process the Georgian version of the Temi Telavi Municipality SEAP was finalized and later translated into English. In parallel to SEAP document, Remissia provided technical support in the development of a detailed technical proposal on one of the mitigation measures identified in the working process. One of the novelties of the Temi Telavi SEAP was the chapter on the agriculture sector. Temi Telavi SEAP was accompanied with the MRV Plan and communication strategy.

3. Mtskheta City Hall:

Despite the fact that the city of Mtskheta is relatively small in population and size in comparison to other cities and municipalities the Project worked with, the process of working on Mtskheta City SEAP turned out to be quite challenging and complicated. The latter was partially due to lack of systematized data and information on SEAP sectors within the City Hall. However, with great support from and direct involvement of the Mayor of Mtskheta, the project managed to finalize the SEAP document together with the MRV plan and communication strategy. Similar to other municipalities, one detailed technical project proposal on a selected mitigation measure was prepared for Mtskheta City Hall as well.

v. *Development of Muni-EIPMP Analytical Tool*

The Long-Term Energy Alternative Planning (LEAP) tool used for Tbilisi's SEAP, the first to use a BAU approach, is complex and beyond the capabilities of most municipalities. As a response, the Joint Research Centre (JRC) of the EU developed a different, though less accurate, approach. EC-LEDS thus decided to develop a simple inventory and projection tool for municipalities, drawing on information from the national MARKAL-Georgia model. This tool can be successfully used by municipalities, but is comprehensive enough to provide planners the insights they require. The approach ensures that actions and decisions taken at the national level will be properly incorporated in the municipal SEAPs, and that the cumulative influence of actions by the municipalities is properly accounted for in the national context.

In year one, EC-LEDS developed modules for transport, buildings, and public lighting sectors, which include submodules for data gathering, emission inventory calculations, and BAU projections for these sectors up to 2020. The public lighting module has the additional capacity to evaluate the impacts of a mitigation measure, substituting existing sodium lamps with LED lamps.

In year two, the following enhancements were made to the model:

- I. The initial year for BAU was made to be flexible, so the users can choose the starting year of their analysis or create additional inventories for monitoring.

2. The last year of BAU scenario was also made flexible, so that emission projections can be evaluated for the years after 2020 as well. This was done because 2020 is fast approaching and new municipalities have very little time to implement their mitigation actions during the remaining period. Thus, a longer time scale for BAU is more appropriate for them.
3. The options for BAU methodologies were added. Users can choose from MARKAL projections, JRC projections, or any other national projections that are available.
4. The module for wastewater was added. For solid waste, the IPCC software can be used and integrated into muni-EIPMP. Modules include estimation of savings from mitigation measures.
5. The sheets for estimating mitigation effects and costs for different mitigation measures were also added. Sheets need to be populated with data from MARKAL analysis, or any other source.

During year three, the tool was tested, revised and updated while developing Bolnisi Municipality SEAP, Temi Telavi Municipality SECAP, and Mtskheta City Hall SEAP. In addition to the harmonization between the municipal and national MARKAL Georgia model, data was completed after which by the end of August 2016, the muni-EIPMP tool was finalized and submitted to all SEAP municipalities for future use and application.

- vi. *Develop and Conduct Workshops and On-The-Job Training on SEAP Development and Monitoring*

In terms of training and capacity building, EC-LEDS conducted three training sessions during year three for the representatives of the selected municipalities as well as those who signed the CoM initiative. The three training sessions are summarized below:

- 1) The second phase of the workshop on “Preparation of project proposals for the GHGs mitigation measures to be implemented in the sectors considered in SEAPs (Sustainable Energy Action Plan)” was held on November 27, 2015 at the Hotel Coste in Tbilisi. The training was jointly organized by Winrock Georgia and Remissia. The Representatives of 13 CoM signatory municipalities participated in the training. The second phase was dedicated to the consideration of concrete project proposals started during the Batumi workshop and finalized later. Three proposals: Sustainable Development Agency of Akhaltsikhe, Programmatic Approach in Low-Emission Rehabilitation of Buildings and Energy Efficiency Lighting of "Rabati Fortress" were presented and discussed. In addition, the low-emission building NAMA proposal developed by the country was presented to the representatives of municipalities in order to have an understanding of the broader picture of paradigm shifts planned by the Government in relation to INDC, the Paris Treaty and commitments within EU association.
- 2) The workshop on monitoring parameters and techniques was conducted on March 31 at the Coste Hotel in Tbilisi. The representatives of eight municipalities attended the workshop. Three Remissia experts gave five presentations on monitoring of mitigation measures, necessary parameters for monitoring per sector, Monitoring Template on the CoM web site, muni-EIPMP and possible institutional arrangements for an effective monitoring process. In the second half of the session, the participants were divided into three working groups to undertake the practical exercise on monitoring issues.
- 3) On August 31, 2016, the Sustainable Development Center Remissia and Winrock Georgia organized the training workshop for the COM signatory municipalities at Georgian Technical University. The theme of the workshop was presenting the final version of the analytical tool

developed by the EC-LEDS project - muni-EIPMP, also discussing its new functions and technical possibilities theoretically (presentation and Q&A sessions) as well as through practical exercises. The representatives of eleven Georgian municipalities attended the workshop. Greeting remarks were presented by Remissia and Winrock Georgia management at the beginning of the workshop. Participants demonstrated high interest in the tool and to its practical application.

vii. *Establishment of Sustainable Energy Offices or Regional Sustainable Energy Resource Centers*

As part of its year three activities, EC-LEDS assisted municipalities in establishing Sustainable Energy Offices. While three municipalities (Akhalsikhe, Batumi, and Tbilisi) made progress toward establishing SEOs, Akhalsikhe allocated funds in their budget and established a Sustainable Energy Agency that integrates SEO functions, Tbilisi and Batumi made amendments to the charters of economic departments, therefore incorporating SEO functions into their departments. Other municipalities, namely Kutaisi and Zugdidi, have not yet completed the process. As the municipal representatives stated, major restructuring is planned in these municipalities after the October 2016 elections and they prefer amending their charters as part of the restructuring process.

Below is a brief summary of activities carried out by EC-LEDS related to SEO establishment to date:

In year two, EC-LEDs team completed an assessment of the legal foundation for participating municipalities to establish Sustainable Energy Offices (SEOs) or Regional Sustainable Energy Resource Centers (RSERCs). A review of the current laws on local authorities and the intended functions of the SEOs and RSERCs led to the conclusion that SEOs can exist only within the structure of an executive office of the city mayor. The proposal incorporated an analysis of normative acts that affect the number of employees that local governments are allowed to hire. However, the majority of municipalities expressed their preference not to create a new unit within a municipality, but instead, suggested assigning SEO related duties to existing staff. Several factors affected the municipalities' decision, the most important of them being financial and bureaucratic constraints. EC-LEDS continued to work with municipalities on identifying optimal ways to perform SEO functions, whether through establishing a standalone unit or through integrating the functions into existing structural units and personnel responsibilities, while also continuing to work on capacity building activities of municipal staff. Training for municipalities on legal as well as financial aspects of SEO formation and operation was conducted in Batumi on August 5, 2015.

Based on EC-LEDS recommendation, and the project proposal developed for establishing a Sustainable Development Agency, Akhalsikhe municipality allocated funds in their 2016 budget and decided to start implementing the project. Among its other functions, the Sustainable Development Agency incorporates SEO functions and will be responsible for CoM related activities, including updating SEAPs, preparing MRV reports and plans, developing climate change mitigation projects and assisting the municipality in attracting funds for the projects.

EC-LEDS team assisted Akhalsikhe municipality in drafting the charter for the Sustainable Development Agency, ensuring that all CoM functions are included and that there is enough flexibility in the charter to allow the agency to expand on its activities and areas of work in the future, further enhancing sustainability.

EC-LEDS continued to work with Kutaisi, Batumi, and Zugdidi on establishment of SEOs. EC-LEDS and the program's legal advisor visited Zugdidi, Batumi, Kutaisi, and Tbilisi municipalities in quarter two of year three in order to assist them in setting up SEOs. Some of the topics and actions that were discussed during these meetings were:

- Number and type of personnel to take on SEO functions, including naming of specific staff,

- Definition of job descriptions for said personnel,
- Identification of capacity building needs, and
- Identification of funding needs and potential sources in case of establishing a standalone unit.

After analyzing the results of the above-mentioned meetings, EC-LEDS drafted amendments to the charters of Economic Development Departments of the municipalities of Kutaisi, Zugdidi, and Batumi and submitted to municipalities for review, acceptance and submission to the city councils for approval. EC-LEDS also asked municipalities to identify areas of deficiencies in their departments focusing on staff capacities and address EC-LEDS with an official letter describing where the municipalities would require further technical assistance.

EC-LEDS discussed possible continuation of technical capacity building for CoM municipalities with the CoM representative, with the focus being on those municipalities that have integrated, or are planning to integrate SEO functions in their departments or have established a separate SEO. As Mr. Abulashvili stated, their office plans to conduct capacity building activities for municipalities in 2017.

viii. Development of Monitoring/Reporting/Verification Plans

In year three, EC-LEDS assisted Bolnisi Municipality, Temi Telavi Municipality, and Mtskheta City Hall to prepare MRV Plans for their respective SEAP documents. No MRV report was prepared in this period of time.

ix. Development of Sustainable Energy Public Awareness Plans

As part of the SEAP process, EC-LEDS assisted municipalities in drafting their SEAP communications strategies. In year three, communications strategies were developed for Telavi Community and Mtskheta SEAPS.

In the reporting period, EC-LEDS designed and submitted the CBSM Design Reports for Kutaisi and Zugdidi pilot campaigns. In January 2016, Kutaisi Municipality City Hall addressed EC-LEDS to change the CBSM activities from greening to installation of a “Solar Tree” in the reconstructed energy efficient park. EC-LEDS decided to follow the request of Kutaisi Municipality and support the installation of a Solar Tree as part of its CBSM Campaign in Kutaisi. The event took place in June 2016.

In August 2016, EC-LEDS submitted a report on findings of Kutaisi’s CBSM Campaign. The purpose of the report was to determine the design and implementation of the second pilot in Zugdidi. The basis for findings of the EC-LEDS CBSM campaign in Kutaisi was the EC-LEDS Facebook page data in the period from June 28th to July 26th and the letter of gratitude from Kutaisi City Hall after the launch of CBSM pilot. Taking into account an upward trend in the number of total likes of the page and reactions to the page posts, feedback from Kutaisi City Hall, EC-LEDS designed the second pilot campaign in Zugdidi.

The Zugdidi CBSM Design Report was submitted in August 2016. The launch of Zugdidi CBSM took place on September 19th.

x. Identification and Implementation of Demonstration Projects via Partial Grants

In October 2015, EC-LEDS announced the second round of the partial grants program and issued RFPs for four municipalities: Gori, Rustavi, Akhaltsikhe, and Telavi City. Ten applications were

received, out of which only four qualified, as six applications did not meet the financial contribution requirement.

In order to evaluate the proposals received, EC-LEDS formed a Grants Evaluation Committee (GEC) composed of the following individuals:

- Chief of Party, EC-LEDS, Winrock Georgia
- Deputy Chief of Party, EC-LEDS, Winrock Georgia
- Environmental Specialist, EC-LEDS, Winrock Georgia
- Head of Energy Efficiency Department, Ministry of Energy of Georgia
- Director, Remissia (EC-LEDS implementing partner)
- Deputy Head of Environmental Policy and International Relations Department (Ministry of Environment of Georgia)

EC-LEDS held the final meeting of the committee on February 29, 2016, where the committee members discussed the revised applications, provided their final scores, and issued recommendations for award. Table 2 below lists applications recommended for award along with their final evaluation scores.

Table 1. Grant Applications Recommended for Award

| City | Applicant Name | Grant Project Title | Requested Grant Amount (USD) | Total Project Cost (USD) | Final Evaluation Score |
|--------------------|------------------------------|--|------------------------------|--------------------------|------------------------|
| Akhalsikhe | Akhalsikhe City Municipality | Energy Savings in Lighting Systems at Rabati Castle (Akhalsikhe) | 50,000 | 246,345 | 475 |
| Rustavi | GEREUA | Heidelberg Cement Georgia CM3 Research and Renovation (Rustavi) | 49,938 | 349,938 | 465 |
| Telavi City | New Technology Center | Green Recreation Zone in Telavi City | 50,000 | 829,167 | 515 |
| Total | | | 149,938 | 1,425,450 | |

As the above table shows, the committee recommended three applications for award.

Rustavi and Telavi City projects were successfully completed in quarter four of year three. As for Akhalsikhe project, its implementation will be completed in year four, due to delays in providing technical specifications by the Akhalsikhe Municipality.

In quarter one of year three, EC-LEDS re-announced the tender for Kutaisi and Zugdidi projects, due to source and nationality issues. EC-LEDS selected GTG as the vendor for Zugdidi and Enterra for Batumi projects. Of the three projects, Zugdidi and two Batumi projects were successfully completed and the opening ceremonies were held in quarter four of year three.

In quarter three EC-LEDS met with the municipalities of Telavi (Temi) and Bolnisi to identify grant projects for award in the third round of the EC-LEDS partial grants program. As a result, EC-LEDS identified two projects and assisted the municipalities in developing the following project proposals: Utilization of Solar Energy through Centralized Solar Farm in Bolnisi and Hybrid Utilization of Biomass and Solar Energy for Heating of Kindergarten Building in Pshaveli Village. Total cost of each grant is \$50,000, with contributions equaling \$432,558 of municipal funds in Bolnisi’s case and \$241,860 in Telavi’s case. Both projects were successfully completed in quarter four of year three.

In quarter three, EC-LEDS met with Mtskheta Municipality Mayor and his technical staff to talk about potential grant projects. As a result, EC-LEDS identified a project, where EC-LEDS decided to participate with its grant. The project concerns construction of a multi-functional sports complex and swimming pool, where the municipality is investing approximately 4.2 million GEL. EC-LEDS received an official letter from Mtskheta municipality and assisted them in developing the project proposal. After receiving USAID's approval, EC-LEDS announced a tender for procurement of roof sandwich panels for the sports complex. Sandwich panels will be delivered to Mtskheta in the week of October 10, 2016, after which the municipality will install the panels and complete the sports complex rehabilitation no later than beginning of December 2016.

By the end of year three, EC-LEDS completed implementation of nine grant projects, out of eleven initiated. The remaining two grant projects, Mtskheta and Akhaltsikhe, will be completed in quarter one of year four.

As part of its year four work plan, EC-LEDS will monitor all implemented grant projects to ensure that municipalities are meeting their commitments as outlined in grant project proposals and to gauge the projects' impact on the development of municipal infrastructure.

xi. Development Credit Authority Guarantees and Financial Institution Assistance

In quarter one, EC-LEDS assisted local companies in submitting concept notes to the Green Climate Fund. Below is a summary of the concepts submitted:

- GBC Georgia and New Technology Center: Green Settlement development, considering rehabilitating a brownfield site and building a green settlement on the land.
- Georgian Geothermal Association +: (1) The study and rehabilitation of geothermal water deposits and boreholes in Zugdidi and (2) The arrangement and rehabilitation of geothermal distribution system in Tbilisi.

EC-LEDS attended a meeting organized by EC-LEDS brownfield concept partner firm, New Technology Center, at the Ministry of Economy and Sustainable Development to discuss public private partnership models for the brownfield concept and other similar projects. Representatives of the Ministry of Economy and Sustainable Development, New Technology Fund (NTC), Winrock International, UNDP, USAID, a representative of the German design firm Dagenbach Landscapes, and a representative of the Green Building Council Georgia attended the meeting. As a result of the meeting, it was agreed that a MoU will be signed between the Ministry of Economy and NTC for cooperation of the Zugdidi brownfield concept and other similar projects in general.

EC-LEDS and USAID representatives held a meeting with Ministry of Finance on November 30. EC-LEDS presented a summary list of projects developed as part of the SEAP preparation process, along with other concepts being drafted by the project.

In quarter two, EC-LEDS held a meeting at Tbilisi City Hall with the Head of the Economic Policy Department and the Head of Kindergarten Agency. The purpose of the meeting was to introduce the Kindergarten Agency Head to the concept proposal developed by EC-LEDS on the energy efficiency rehabilitation program for Tbilisi Kindergartens.

The EC-LEDS initiated Tbilisi bus fleet replacement project was successfully concluded, with EBRD providing an extension to a sovereign loan of up to EUR 27 million to Georgia to be on-lent to the City of Tbilisi for the benefit of the Tbilisi Transport Company Ltd, a municipal company, which operates buses and the metro in Tbilisi. The project is co-financed by a capital grant of EUR 7 million from the E5P. As a result, Tbilisi will procure 143 new environmentally-friendly, compressed natural gas (CNG) low-floor buses.

Component Two – Completed in Year Two.

B. Component Three: National EC-LEDS Working Group and Advisory Assistance

The bilateral EC-LEDS initiative provides a strategic framework for the GOG to articulate concrete actions, policies, and programs that slow the growth of emissions while advancing economic growth and meeting Georgia’s development objectives. This framework will provide a foundation for achieving long-term, measurable GHG emission reductions, as compared to a Business-As-Usual (BAU) development pathway, and for improving environmental management in Georgia.

Representatives of the U.S. Government, including USAID, and the GOG (from various ministries) formed a LEDES Committee to achieve the goals and actions agreed upon by both countries in the Memorandum of Understanding signed on December 17, 2012. EC-LEDS participates in the LEDES Committee and plays a critical role in ensuring assistance activities are linked with national priorities, and that data, findings, and results at the municipal level are used to inform national actions, policies, and programs.

Initial activities focused on capacity-building and meeting key LEDES Steering Committee (SC) members and their Expert Working Group (EWG) members to share the significance of LEDES and the assistance available from the EC-LEDES program. Managing the LEDES process, including organizing meetings of the EWG and SC, and assigning LEDES analysis and policy formulation to various LEDES SWGs, is a significant and complex task. Below is an over-all summary of activities continued during year three:

- Continued collaboration with the MOE’s Analytical Department (MOE-AD) to update the MARKAL Georgia model.
- Added functionality to enable analysis of non-energy emissions.
- Incorporated data from the EC-LEDES municipal baseline survey into the MARKAL model.
- Intensified capacity building activities by providing a series of training sessions and consultancy services to the sectoral SWGs, the Climate Change Office of the MoENRP, and the GOG.
- Regularly provided valuable advisory assistance to the GOG and arranged a series of high-level meetings.
- Active involvement in the works of all major International projects, training and programs, including Georgia’s First Biennial Update Report (FBUR) to the UNFCCC, managed by UNDP.
- Intensified works on MARKAL Georgia in order to finalize the BAU.
- Prepared sectoral overviews on transportation, buildings, energy and industry.
- Prepared LEDES chapters on transportation, buildings, energy, and industry.
- Prepared MARKAL-Georgian guidebook.
- Prepared presentations and facilitated the meetings with sectoral working groups.

i. Provide Advisory Assistance to the GOG

In the first quarter of year three, Remissia started the MARKAL update process. The weekly meetings with the MOE-AD on updating MARKAL-Georgia model were held every Tuesday to discuss current data availability, data gaps, and steps to start working on the model update. The work on the MARKAL-Georgia guidebook started as well as preparation of the section on naming conventions for commodities and technologies. The expert for energy efficiency in industry sector was hired. The meeting was held with Rustavi Azoti, and data availability as well as energy efficiency

measures in this major chemical enterprise were discussed. Several energy efficiency measures were identified for further analysis.

The EC-LEDS team began preparation of the transport sector overview with the analysis of available information and documents on the transport sector prepared by other projects or government agencies. In addition, the questionnaires were developed for the National Statistics office and industrial plants to gather industrial related data for mitigation measures assessment. On December 15, 2015, National Statistics Office of Georgia published the 2014 energy balance. The new energy balance was compared to 2013 and the differences in energy consumption were analyzed. Emission inventory for 2014 Energy sector was developed.

During the second quarter Remissia's activities were again focused on updating MARKAL-Georgia, which included shifting the starting year to 2014 and checking, validating, and updating all other data. The model was also simplified to fit with available data and make it easier to operate by the MOE-AD. Remissia incorporated all comments from the Analytic Department of the Ministry of Energy and DWG in the model. Several sensitivity scenarios (for GDP and population growth) were prepared and results were sent to the Climate Change Office of the Ministry of Environment and Natural Resources Protection. DWG started setting up the scenarios in MARKAL-Georgia for analysis of mitigation measures in close coordination with Remissia.

The preliminary table of contents (TOC) for LEDS was prepared, while Remissia staff and experts worked on development of the sectoral overviews for four LEDS chapters (energy, buildings, transport, industry), which include descriptions of the current situation in the sector, past trends and existing development goals, as well as legislative base and institutional setup for the sector. The emission trends for past years have been analyzed for all four considered sectors – energy, buildings, transport, and industry.

The preliminary list of mitigation measures that will be analyzed using MARKAL-Georgia was also expanded and sent to the Ministry of Energy for their analysis in relation to overlaps with the National Energy Efficiency Action Plan. To include all actions that are strategically viable and underway, several meetings have been carried out with respective departments in the Ministries, including the Energy Efficiency and Renewable Energy Department in the Ministry of Energy, the Transport Policy department in the Ministry of Economy and Sustainable Development, and the Air Protection Department in the Ministry of Environment and Natural Resources. Industry questionnaires that were filled in were analyzed for mitigation options and energy consumption indicators. Relevant metrics and indicators were developed (emissions per capita, emissions per GDP, etc.) for each sector and where possible, compared with similar metrics from other countries. Remissia experts regularly held weekly meetings with the Analytic Department to build the technical capacity of the Ministry staff.

In the third quarter Remissia continued work on analysis of activity data, energy consumption, and emissions in each considered sector to be used as a basis for the development of sectoral overviews and mitigation options.

The results of the analysis of sectors were presented and discussed in sub-working groups (SWG) meetings for transport, buildings, energy, and industry. The project team prepared and delivered two presentations per each working group, one presentation focusing on the analysis of emissions and past and future trends, and the second on the mitigation options in considered sectors.

Based on the outcomes of the SWG meetings, EC-LEDS prepared the list of changes to be made to BAU scenario and mitigation scenarios and sent to DWG for incorporation in MARKAL-Georgia. MARKAL-Georgia's BAU scenario underwent final review and updated BAU report was prepared.

Based on all technical work conducted as well as working meetings with the sectoral SWGs, the first versions of the industry, transport, energy, and building sector overviews and mitigation measures were finalized in Georgian, translated in English, and submitted.

After that, Remissia started work on the development of sectoral chapters, which consists of three parts: description of current situation in the sector (short versions of overviews), sectoral LEDS strategy for 2030 and description of mitigation measures within the sector.

The project team also prepared presentations for working groups and steering committee meetings to be held in July 2016. The EU legislation and individual EU Member countries' policies were analyzed in each sector to present to sub-working groups and propose the best low emission development strategy for Georgia.

A meeting was held with the Climate Change Office of Ministry of Environment and Natural Resources Protection to update them on the current status of development of LEDS and plan working group and steering committee meetings in July 2016.

During the fourth quarter of year three, the main work undertaken by Remissia was the finalization of drafts of the sectoral chapters of the LEDS document. In particular, the elements (including strategic priorities and mitigation measures) of the draft chapters on industry, transport, energy and buildings were presented to the respective sub working groups for their review and comments. The draft chapters were finalized based on the discussions and comments and were later sent to the SWGs electronically for final revisions, comments, and feedback.

It should be noted that several presentations were prepared and presented for each sectoral working group meetings, mainly covering current situation analysis, low emission development strategy, and mitigation measures per sector. In addition, the EU legislation and individual EU Member countries' policies were being analyzed in each sector and presented as well. The CC office of the MoENRP regularly received updates and clarifications from the EC-LEDS advisor on the projections related to the increase of total primary energy use in BAU scenario, the EC-LEDS advisor in cooperation with the Head of CC office worked on updated MARKAL Georgia BAU scenario reports provided by EC-LEDS. As follow-up activities, the EC-LEDS advisor worked with the head and the staff of the MoENRP CC Office and discussed the sectorial SWGs inputs and analyses on relevant sectorial emissions, as well as mitigation options to be reflected in MARKAL Georgia, which was revised and updated by the project.

After sectoral working group meetings Remissia was in the process of receiving and analyzing the comments and feedback on different LEDS chapters. In particular, the comments from the Air Quality Department of the Ministry of Environment and Natural Resources Protection were received for the transport sector and addressed accordingly. The Research and Analytic Department of the Ministry of Internal Affairs indicated that they have no comments on the transport sector chapter. The Service Agency of the Ministry of Internal Affairs provided question on eco-driving measures in the transport chapter, and Remissia provided a detailed answer on that question. The letter was received from the Ministry of Economic and Sustainable Development indicating that they will provide their comments on three sectoral chapters (transport, buildings and industry) at the beginning of September. No other comments were received officially by the end of September.

The final LEDS chapters were translated into English and submitted to USAID. Meanwhile, the MARKAL-Georgia guidebook was prepared (English version) and submitted to USAID.

IV. CAPACITY BUILDING AND TECHNICAL ASSISTANCE TO GOG

EC-LEDS held a series of working meetings with the head of the CC office of MoENRP in order to coordinate the work, providing regular updates on the development and research in LEDS. The head of the CC office of MoENRP, also outlined the issues where the Ministry of Environment would need help from the EC-LEDS Program as well as assistance and capacity building. The parties agreed to intensify mitigation options research in all sectors and more actively involve the sectoral SWGs in the process of LEDS development. Meanwhile, EC-LEDS worked intensively with the Ministry of Economy and Sustainable Development (MoESD). The advisor was invited to the Ministry of Economy and Sustainable Development of Georgia to meet the Ministry's Deputy Head of the Legal Department. At the meeting the parties discussed the legal aspects related to the installation of renewable energy facilities. The Ministry of Economy received from the EC-LEDS Advisor detailed information about the installed capacity of photovoltaic systems (350 kWt) under the governmental grant of the Japanese government to Georgia, which is considered as an effective and innovative measure of developing alternative renewable energy sources in Georgia.

EC-LEDS regularly worked together with the CC office of MoENRP on the research, findings, and ongoing issues needed for further progress of the LEDS process. EC-LEDS special activities have increased coordination with the sectoral SWGs. Several aspects of collaboration between Winrock, the CC Office of MoENRP, other Ministries, and the main stakeholders involved in LEDS process, were revised and updated. In addition, the EC-LEDS program was asked to help the CC office to increase communication and coordinate with the stakeholders within the framework of the LEDS process in Georgia. The EC-LEDS advisor regularly worked with the head of the CC office of MoENRP, the Head of the CC office of MoENRP, and the staff, as well as the SWGs and other stakeholders to ensure progress of LEDS process. Special focus, at the request of the CC Office, was made on the mitigation options for the non-energy sector. The possible options were analyzed and evaluated. Since the MARKAL thus far is dealing with energy related issues, the CC office also discussed the possibilities to extend MARKAL Georgia's coverage and include the non-energy sector as well.

EC-LEDS also arranged a working meeting with the Air Protection Department Head of the MoENRP. The meeting was dedicated to the discussion of air quality, air protection, and air pollution issues in the transport sector. The parties discussed GOG decrees #124 and #238, regulating the quality of gasoline and diesel fuels in Georgia. They also discussed the European Union (EU) directives related to the EU-Georgia association agreement #2009/30/EC related to fuel quality. EC-LEDS provided the results of the research and findings of LEDS in the field of transport related air pollution and GHG emissions.

EC-LEDS conducted a series of working meetings with the representatives of Georgian Railway (GR) as well. The GR experts provided detailed information related to ongoing and planned projects of GR, as well as trends of freight and passenger transportation. The parties analyzed the potential of Georgian Railway to increase freight cargo share of freight truck vehicles and thus reduce emissions related to cargo transportation. The mitigation measures related to the Georgian railway system were also discussed at the meeting.

The CC office of the MoENRP regularly received updates and clarifications from the EC-LEDS advisor on the projections related to the increase of total primary energy use in the BAU scenario, the EC-LEDS advisor in cooperation with the Head of CC office worked on updated MARKAL Georgia BAU scenario reports provided by EC-LEDS. As follow-up activities, the EC-LEDS advisor worked with the head and the staff of the MoENRP CC Office and discussed the sectorial SWGs inputs and analyses on relevant sectoral emissions, as well as mitigation options to be reflected in MARKAL Georgia, which was revised and updated by EC-LEDS project.

Sub - working groups (SWGs)

During the reported period, EC-LEDS worked intensively on energy related emissions of the relevant sectors. The results and findings were presented and discussed at the meetings of SWGs. On April 8, 2016, EC-LEDS organized a LEDES Transport Sub-Working group meeting. Stakeholders from various governmental, private and non-governmental organizations working in the transport sector of Georgia and the USAID participated in the meeting. EC-LEDS organized and conducted a number of follow-up meetings with the Transport Sub Working Group at the Ministry of Economy and Sustainable Development. The new head of Transport SWG and the members of the transport SWG, discussed a wide spectrum of issues related to transport sector emissions. EC-LEDS, transport SWG and the Head of the Land Transportation Department discussed the major projects and planned strategies for the transport sector, especially the long term development plans, as well as strategies in land and railroad transport. The Ministry of Economy provided transport sector data on current projects along with related statistics.



Photo 1: Transport SWG meeting at the Ministry of Economy and Sustainable development, July 15, 2016

The next important meeting of the Energy sub-working group was held on April 13, which took place at the Ministry of Energy and was attended by the representatives of all major stakeholders.

The meeting summarized the research and findings of LEDS in the sector and analyzed the proposed mitigation options.

The following SWG Industry sub-working group meeting was organized by EC-LEDS on April 18. The members of the group received comprehensive information based on LEDS research in this sector. The experts agreed on the BAU projections and discussed the related mitigation options.

On May 10, 2016, EC-LEDS organized a LEDS Buildings Sub-Working group meeting. The meeting was attended by the SWG members, invited experts, USAID representatives and other stakeholders. Two Presentations were made: “Overview of the Buildings Sector of Georgia” and the “Mitigation Measures in the Building Sector of Georgia”. The presentations were followed by general discussions and questions. EC-LEDS provided analyses, projections and comprehensive information on the Buildings sector development in Georgia.

EC-LEDS organized a second set of meetings with the sub working groups in July. The Industry and Transports sub-working group meetings were held at the Ministry of Energy on July 12 and July 15 correspondingly, where Remissia presented three presentations per sector, one covering the current situation within the sector, another current EU policy for this sector and topics addressed in the association agreement of Georgia with the EU and the third presentation concerned the low emission development strategy for that sector and corresponding mitigation measures. The sub-working groups discussed and commented on the strategies and measures.

The Energy SWG meeting was held on July 21, 2016 at the Ministry of Energy (MoE), which was attended by Winrock EC-LEDS staff, Remissia, USAID, the representatives of the Ministry of Energy, Ministry of Economy and Ministry of Environment and Natural Resource Protection (MoENRP), as well as invited experts. Three presentations were made, which covered all aspects of the energy sectors and envisioned the mitigations options.

On July 28, 2016, EC-LEDS organized a building sector SWG meeting, which took place at the Ministry of Economy. The meeting was attended by representatives of the Ministry of Environment, Ministry of Energy, Ministry of Economy, USAID, invited experts, Winrock EC-LEDS staff, and Remissia. The presentations covered the buildings sector of Georgia, analyzed the trends, mitigation options, and the obligations of Georgia in relation with the country’s agreement with the EU.

As the results of SWG meetings and discussions with the SWG members and invited experts EC-LEDS received feedback from the sectorial SWGs and ministries, and the feedback was analyzed and discussed with the Climate Change office of the Ministry of Environment. The remarks, ideas, and opinions of the sectorial SWGs and experts were further analyzed in order to be included in the final versions of the four chapters (energy, transport, industry and buildings) of the LEDS document.

Advisory Assistance to Tbilisi City Hall

During the reporting period, EC-LEDS extended its activity with the government bodies and, alongside the ministries (the main stakeholders of the LEDS process), worked intensively with Tbilisi City Hall. EC-LEDS provided consultancy services to the municipality officials in the field of clean transportation.

The LEDS Advisor had a meeting at Tbilisi City Hall with the Head of Economic Service of Tbilisi Municipality and the head and the staff of the Transportation Department. LEDS Advisor informed the City Hall officials about the LEDS findings related to the emissions from the transport sector and focused on the emissions related to Tbilisi municipality transport. The parties also discussed the possibilities of introducing alternative, renewable, eco-friendly fuel for the municipality transport fleet as a strong mitigation option.

The working meeting was held with the representatives of Tbilisi City Hall and the members of the LEDS Transport SWG. The staff of the Tbilisi City Hall Transport Department needed assistance in evaluating GHG reduction from public transport powered with natural gas (versus diesel fuel). The efficiency of 142 new municipal buses working on natural gas, as part the Tbilisi City Hall project, was also analyzed.

Ensure involvements in international projects, trainings and programs

In November 2015, EC-LEDS helped MoENRP to organize a conference entitled, “Climate Change Policy in Georgia and Preparation for the Paris Agreement 2015.” EC-LEDS participated in the panel discussions on climate change and how it relates to Low Emissions Development Strategies (LEDS); climate change mitigation options and adaptation measures; climate change challenges and opportunities; Nationally Appropriate Mitigation Actions (NAMA) and Intended Nationally Determined Contribution (INDC).

The EC-LEDS advisor participated in a workshop organized by UNDP on development of biomass production as an alternative to firewood for heating purposes in Georgia that took place on November 16, 2015 in Tbilisi. The workshop was focused on Georgia’s potential to develop alternative, renewable, solid fuel production from biomass and replace firewood, as well as fossil fuels, such as natural gas, coal, and oil consumption in Georgia.

In February, EC-LEDS participated in the international seminar “Efficient Energy Use and Planning,” organized and sponsored by the Swedish International Development Agency (SIDA) dedicated to modern technologies and trends designed to reduce energy consumption in the residential sector and to analyze the EU Countries best practices, which is relevant for Eastern European countries.

On March 4, The EC-LEDS COP participated in the Stakeholders’ Coordination Panel organized by the National Association of Local Authorities of Georgia (NALAG) under the USAID “Institutionalization of Climate Change Adaptation and Mitigation in Georgian Regions” project. Different experts presented the Road Map on Climate Change explained under the program. Participants actively discussed LEDS process related activities during the meeting. EC-LEDS participated in Georgia’s First Biennial Update Report (FBUR) to the UNFCCC; project managed by UNDP. The workshop was focused on the Inventory of the GHG Emissions for the period of 2010-2013. The EC-LEDS Advisor and Remissia’s Technical Director provided information and clarification to number of issues related to Energy and Transport sectors emissions and respective mitigation measures to workshop participants.

A. Environmental Protection Activities

In accordance with 22 CFR 216 Environmental Compliance Procedures and approved Initial Environmental Examination (IEE, DCN: 2012-GEO-076) EC-LEDS has been putting efforts towards incorporation of environmental safeguards into consideration of all program components and activities.

Following the approval of the EC-LEDS Programmatic Environmental Assessment (PEA) document on June 19, 2015, under the scope of USAID environmental compliance procedures, EC-LEDS put efforts toward elaboration of sub-grant projects related to environmental compliance documentation. For that purpose, proposed sub-grant activities were analyzed against several critical factors, such as: the character of proposed actions, the type of structural measures, and whether the proposed structural actions, their impacts, and mitigation measures are considered in the PEA defined Environmental Monitoring and Mitigation Plans EMMPs.

Corresponding to the development and implementation of the EC-LEDS sub-grant project activities, one Environmental Review Checklist (ERCs) document and several “Activity-Specific Environmental Monitoring and Mitigation Plans (EMMP) have been developed.

As per the scope of the approved EC-LEDS Programmatic Environmental Assessment (PEA) document, the Environmental Review Checklist (ERC) for “Heidelberg Cement Georgia CM3 Research and Renovation project in Rustavi” was submitted to USAID for approval. On 27 April 27, 2016 USAID officially approved the Environmental Review Checklist (ERC) document for “Heidelberg Cement Georgia CM3 Research and Renovation project in Rustavi”.

In the light of sub-grant project development and implementation, EC-LEDS Environmental Specialist conducted a series of site visits for the purpose of gathering information and baseline data for expansion of activity-specific individual environmental assessments. Periodic monitoring site-visits have been conducted as well.

B. Cross-Cutting Activities

i. Public Communications and Outreach

In order to reach Program goals and build a clear understanding of the benefits of clean energy, energy efficiency technologies, and tools for their implementation, the program incorporates public outreach activities across all components.

Outreach and Communications goals include:

- reaching 1 million Georgian citizens with core messages,
- leading to energy and money-saving actions by at least 100,000 people;
- increasing citizen awareness that energy saving measures improve the comfort in buildings and houses and reduce costs while decreasing GHG emissions, and
- creating a positive image for EC-LEDS.

In year three, the EC-LEDS outreach and communication campaign was supported by the EC-LEDS Facebook page, a quarterly newsletter, Public Service Announcements (PSAs), flyers and promotional items (caps, t-shirts, key-chains and pens).

In year three, EC-LEDS produced a Success Story about the beneficiaries of Tbilisi Elders' Boarding House, where EC-LEDS implemented a project “Warm Elderly – Energy Efficiency Measures for Tbilisi Elders' Boarding House.” The project was implemented by the Energy Efficiency Center Georgia, with co-financing from BP Exploration (Caspian Sea) Ltd. in its project “Renewable Energy

& Energy Efficiency New Project,” Tbilisi City Hall, State Fund for Protection and Assistance of (Statutory) Victims of Human Trafficking, Charity Foundation Iavnana and USIAD-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program implemented by Winrock International.

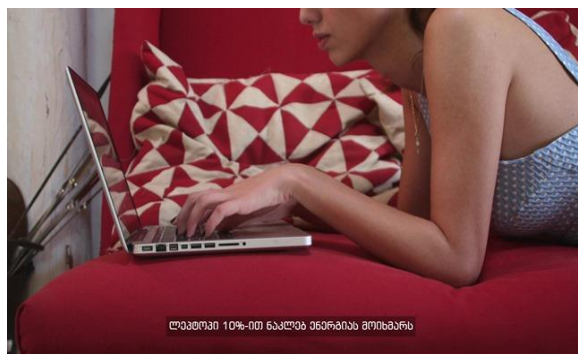
In year three, EC-LEDS and its service provider, PR firm Fast Forward Communications (FFC), produced two 30-second PSAs that were aired as a social advertisement on Channel 1 and Imedi TV. These short animated films give the audience examples of energy efficient facts along with dos and don'ts for economizing energy. A summary of all PSA scenarios is provided below:

Scenario #1:

- ✓ A laptop consumes 10% less energy than a personal computer.
- ✓ When cooking, the size of a pan should fit the size of a burner.
- ✓ By covering a sauce pan tight, you save 14% energy.
- ✓ If fire goes out, it is necessary to close the cover in order to maintain warmth in the room generated from fireplace or wood stove.
- ✓ Energy Efficiency Is A Smart Choice!

Scenario #2:

- ✓ During a sunny day, move curtains to use daylight efficiently.
- ✓ Reducing water losses by at least 5%, we can save 40.3 m³ of water annually, which is 13.8 million kWh in saved energy. The less water used, the less energy is consumed.
- ✓ Energy Efficiency is a Smart Choice!



Screenshot 1. EC-LEDS PSA



Screenshot 2. EC-LEDS PSA

By the end of year two, the EC-LEDS Outreach Team initiated a Facebook contest entitled “Energy Efficiency is a Smart Choice”. The contest was launched on October 7 and continued until the week of February 29, 2016. The EC-LEDS Outreach Team posted a question once a week and awarded winners with EC-LEDS promotional caps, t-shirts, and key chains at the EC-LEDS office. By the end of year three, the EC-LEDS Facebook page reached 4,351 likes, among them the most active group is youth from 18-24 years of age.

In the reporting period, EC-LEDS supported the Municipalities of Kutaisi and Zugdidi in the

application of Renewable Energy technologies as part of the EC-LEDS Community-Based Social Marketing campaign (CBSM). The first Georgian Solar Tree, a daisy-shaped structure, was installed in Kutaisi Public Park. The newly reconstructed park was a result of the Kutaisi City Hall's endeavor to fulfil commitments taken within the Covenant of Mayors, as well as an accomplishment of goals prescribed in the Sustainable Energy Action Plan (SEAP).

In January 2016, Kutaisi Municipality decided to arrange an energy efficient public park in the center of Kutaisi and addressed EC-LEDS to change the CBSM activities from greening to installation of the "solar tree" in the park. A solar tree is a decorative structure using one or multiple solar panels to produce electricity. Solar trees are intended to bring visibility to solar technology and to enhance the landscape they complement in a public context. The major objective of solar tree installations is to promote awareness, understanding, and adoption of renewable energy. EC-LEDS decided to follow the request of Kutaisi Municipality and support the installation of a solar tree as part of its CBSM Campaign in Kutaisi.

The second installation, an autonomous charging station, was created for Zugdidi City and installed in the skate park. Zugdidi CBSM was designed and planned on the basis of the findings from the Kutaisi pilot and a letter from the Municipality to support them in the implementation of the so-called "solar tree" idea, instead of planned activities – promotion of energy efficient lighting. The basis for findings of the EC-LEDS CBSM campaign in Kutaisi was the EC-LEDS Facebook page data in the period from June 28th to July 26th and the feedback from Kutaisi City Hall after the launch of CBSM pilot. Facebook Insights Data covered the information about actions on page, likes, views, post reaches and engagement, viewers' age groups, geographical location and language. As a signatory to the Covenant of Mayors, Zugdidi too has a goal that should be achieved in parallel with the city's social and economic development.



Photo 2 A daisy-shape Solar Tree in the Energy Efficient Park in Kutaisi



Photo 3. Presentation of a Solar Tree in Zugdidi

The launch of the CBSM campaign in Kutaisi took place on June 30 and was highlighted by national TV channels and social media. The CBSM Campaign in Kutaisi was a set of activities specifically designed to complement each other in popularization of solar energy. The EC-LEDS Outreach Team

started a promotion of solar energy via the EC-LEDS Facebook page “Energy Efficiency Is a Smart Choice.” Twice a week the Outreach Team uploaded a poster and information about solar energy and solar energy technologies.

The launch of Zugdidi CBSM was held on September 19 at the skate park in the center of Zugdidi (in front of the House of Justice). The EC-LEDS Outreach Team designed and printed a promotional brochure about solar energy, which was distributed during the presentation of a Solar Tree in Zugdidi.

The EC-LEDS National outreach campaign is supported by printed materials. During the reporting period the outreach team produced two flyers about solar energy technologies specifically designed for the CBSM campaigns in Kutaisi and Zugdidi. In addition, the CBSM campaign was accompanied by the EC-LEDS brochure “Energy Efficiency Is A Smart Choice,” a Quarterly Newsletter, and branded T-shirts and caps. The event was highlighted by local media and promoted via Facebook.



Photo 4. EC-LEDS flyer (Kutaisi CBSM)



Photo 5. EC-LEDS Flyer (Zugdidi CBSM)

EC-LEDS produced the Quarterly Newsletters and distributed it during EC-LEDS events and via e-mail.

Each year, COM Municipalities host Energy Days in the month of June. In Georgia, the Energy Efficiency Center organizes these events in cooperation with Municipalities. In year three, EC-LEDS participated in a series of events under Sustainable Energy Week 2016, organized in collaboration with the Energy Efficiency Center (EEC) Georgia, and Kutaisi City Hall. The list of events is summarized below:

- Tbilisi - The EC-LEDS team participated in the presentation of the project “Warm Elderly – Energy Efficiency Measures for Tbilisi Elders’ Boarding House.” The multi-stakeholder project was implemented by the Energy Efficiency Center Georgia, with the co-financing from BP Exploration (Caspian Sea) Ltd. within its project “Renewable Energy & Energy Efficiency New Project,” Tbilisi City Hall, State Fund for Protection and Assistance of (Statutory) Victims of Human Trafficking, Charity Foundation Iavnana and USIAD-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program implemented by Winrock International.

- Kutaisi - The EC-LEDS team participated in the presentation of the project “Low Emission Development for Sport – Kutaisi Torpedo vs CO₂.” Energy efficiency and renewable energy solutions were implemented at the Torpedo Sport Base including procurement and installation of a 2000L capacity solar water heating system, connection of the local grid to a PV system, and replacement of existing incandescent light bulbs with 350 compact fluorescent lamps. In a joint effort by Energy Efficiency Center Georgia (EEC), with co-financing from BP Exploration(Caspian Sea) Ltd. in its project “Renewable Energy & Energy Efficiency New Project,” Kutaisi City Hall, and the USAID-supported EC-LEDS Clean Energy Program.

In year three, EC-LEDS held a series of presentations on renewable energy and energy efficiency demonstration projects:

- Zugdidi –Presentation of LED Street Lighting Demonstration Project in Zugdidi took place in September 2016. EC-LEDS assisted Zugdidi City Hall by procuring 152 new LED lamps that the municipality installed on David Aghmashenebeli Avenue.
- Batumi – EC-LEDS held two presentations of LED Street Lighting Demonstration Projects: procurement of 130 LED outdoor lighting fixtures for Batumi Municipality which were installed the full length of Gorgiladze Street, including the new extension, and LED lighting fixtures that were installed in the stadium of the newly opened public park on Lermontov Street as a demonstration of energy efficient technologies in the framework of the city’s Sustainable Energy Action Plan.
- Rustavi - Heidelberg Cement Georgia Cement Mills Research and Renovation Project was held in Rustavi Cement Plant in September 2016. The project was implemented in collaboration with Heidelberg Cement Georgia.

ii. People with Disabilities (PWD), Youth and Gender

In year two, the EC-LEDS Clean Energy Program finalized the Cross-Cutting Action Plan and submitted it to USAID. The Plan addresses the issues of gender, youth, and people with disabilities in its outreach efforts and includes producing promotional and educational materials specifically for people with disabilities; using subtitles for the deaf and nonverbal and Braille for blind children and adults.

Since December 2014, EC-LEDS has cooperated with USAID’s Momavlis Taoba (Future Generation) program implemented by PH International. In 2010 PH International created a civics education web portal (www.civics.ge) within the framework of the USAID-funded Applied Civic Education and Teacher Training Program. The Momavlis Taoba Program has supported this web portal since 2014. The purpose of the web portal is to increase public awareness of civic education as a means to influence the knowledge, attitudes and behaviors of youth as active participants in Georgia’s democratic society.

In the reporting period, EC-LEDS held four youth events in the regions of Georgia. Events were held in Tbilisi, Misaktsieli, Mtskheta, Rustavi and Tbilisi.

The event in Tbilisi took place in Public School #202 (Boarding House for Blind Children) on September 22nd, 2016. Participants of the events were youth in the 7th-12th grades. At the end of the

seminar all students were awarded with participation certificates, promotional flyers with Braille print, EC-LEDS branded T-shirts, caps and key chains.

These events aim to involve youth and PWD in energy efficiency through education and training, and empower PWDs through education on energy efficiency and provide them with equal opportunities to enjoy the benefits of energy efficient behaviour.

During the event, students watched a presentation on “How to Save Energy,” and participated in a contest, “Energy Efficiency is a Smart Choice” to demonstrate their EE skills acquired at the seminar. The seminar was conducted by Dean of the Energy and Telecommunications Faculty at Georgian Technical University.

The EC-LEDS Youth Energy Efficiency Events were two and a half hours long, of which the first two hours were dedicated to “How to Save Energy.” The seminar covered the following topics:

- What is Energy Efficiency?: A brief introduction to energy efficiency and explanation of energy terms.
- Ways to Save Energy: Various ways to save energy and the energy audit.
- Information Campaigns: A brief description of advertising and information campaigns about energy efficiency.
- The Importance of Energy Efficiency: The importance of energy efficiency with regard to the rational use of energy, energy security of the state, and the importance of energy efficiency for Georgia.
- Energy Efficiency in the Residential Sector: How to save energy at home.
- Energy Efficient Technologies: An introduction to technologies and appliances.
- Renewable Energies: A discussion of renewable energy sources with examples of technologies and how to use them.
- Energy Efficient Projects: Some energy efficient projects supported by donor organizations.



Photo 12. EC-LEDS Flyers and key chains



Photo 13. : Medals for EC-LEDS Youth Event winners



Photo14. EC-LEDS Promotional Items distributed among participants of Youth/PWD EE events

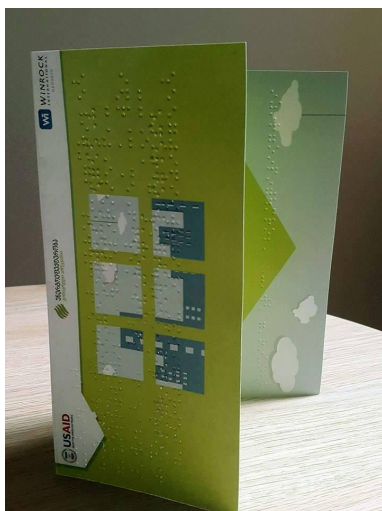


Photo 15. EC-LEDS flyers with Braille print for the blind



Photo 16. EC-LEDS Youth/PWD Event Participation Certificate

On September 30, EC-LEDS participated in the opening ceremony of PWD Children’s Rehabilitation Center in Rustavi. The center was renovated by Heidelberg Cement as part of its social project. The EC-LEDS team gave children branded T-shirts, caps and promotional flyers.

iii. *Cooperation with Other USAID Programs*

EC-LEDS cooperated with the USAID Governance for Growth (G4G) project by attending quarterly meetings arranged by G4G for USAID EG office partners, where the project progress information from each partner was shared and possible cooperation was discussed among participants.

Based on the request of G4G project management, EC-LEDS conducted an information session on the requirements of Open Data Policy for their staff. Winrock shared its experience on submitting datasets to USAID and the procedures outlined in ADS 579.

iv. *Cooperation with Other Donors*

In year three, EC-LEDS continued intensive collaboration with the E5P. Several meetings were held between EC-LEDS, E5P, USAID and Ministry of Finance representatives, where EC-LEDS presented a summary list of projects developed as part of the SEAP preparation process, along with other concepts being drafted by the project for possible inclusion in the E5P pipeline.

During year three EC-LEDS worked on the development of only four chapters for the LEDS document, mainly concentrating on energy emissions for the transport, energy, industry and buildings sectors. EC-LEDS cooperated with the EU Clima East program leveraging technical assistance for non-energy emission work on Industry for the remaining parts of the LEDS document. EC-LEDS assisted Clima East industrial climate mitigation experts in data gathering and task processing.

EC-LEDS cooperated with GIZ in the framework of the German Government Initiative for “Developing Capacities for Alignment with the EU Climate Targets in the Eastern Partnership Countries.” This project provides advisory services and addresses specific needs that arise related to the implementation of selected EU Directives with synergies to climate change. The EC-LEDS team participated intensively in all working meetings, workshops and seminars dedicated to the discussion

the development of a roadmap for the Climate Action Plan of Georgia, where the work produced by EC-LEDS is of fundamental importance for the GIZ project.

EC-LEDS collaborated with the EBRD project on the development of the National Energy Efficiency Action Plan (NEEAP), where the EBRD expert team used all the data and material developed in the framework of the LEDS MARKAL GEORGIA model for their recommendations.

EC-LEDS collaborated with UNDP in the framework of the project “First Biennial Update Report (FBUR) to the UNFCCC.” Intense consultations and meetings were held between UNDP and EC-LEDS teams. MARKAL GEORGIA data was provided by EC-LEDS to FBUR for further analysis and recommendations.

v. *Local Partner Capacity Building*

During year three the EC-LEDS program continued providing training, workshops and on-the-job capacity building to its local partner organization which contributed to local partners’ successful implementation of program activities.

Based on the Organizational Capacity Assessment submitted by EC-LEDS to USAID in year two the decision was made by USAID not to consider directly awarding local NGO(s) to perform continuing and follow-on work to the current EC-LEDS program during the 2016-2018 timeframe.

C. Project Administration

i. *Constraints and Critical Issues*

EC-LEDS prepared an assessment of the legal framework and recommended to establish SEOs as structural units of the Municipality, with the aim for the municipality to later spin-off these structural units, as partially or wholly municipally owned limited businesses (Ltds).

However, due to legal and financial constraints municipalities were not able or willing to establish SEOs according to the recommended form. Because of this, EC-LEDS started working with municipalities to identify optimal ways to perform SEO functions, and achieved consensus with municipalities to integrate SEO functions into their economic departments. EC-LEDS drafted respective amendments to the economic departments’ charters and asked municipalities to make the changes to their economic departments.

While success was achieved in some cases, namely Akhaltsikhe, where the municipality established a standalone unit; Batumi and Tbilisi, where proposed amendments to the charters of economic departments were adopted, EC-LEDS was not able to achieve success in cases of Kutaisi and Zugdidi, where municipalities preferred to delay the process of making the amendments until after elections.

This interaction with municipalities proved that it is extremely difficult to achieve the desired results where the decision lies only with the beneficiary, and there is little to no leverage with the implementer to influence the beneficiary’s decisions. While significant efforts were made to increase the municipalities’ understanding of the importance of the issues, and efforts were made to increase the capacity of municipal staff, the program still was not able to achieve a satisfactory outcome within the given timeframe.

ii. *Cooperative Agreement Modifications and Amendments*

On June 1, 2016 Winrock received an official letter from USAID with the intention of adding new activities to the Cooperative Agreement for providing support to the GoG for a development of a complete low emissions development strategy document that would cover both energy and non-energy related emissions, thus adding four new chapters on Industry, LULUCF, Waste, and Agriculture and cross cutting sub chapters to the existing document. The letter also indicated the intention of the donor to cancel activities related to preparing implementation of the transitional award of the EC-LEDS program. After providing all necessary documentation EC-LEDS received Modification 8 for the implementation of additional tasks on September 12, 2016.

During year three, the subject cooperative agreement was modified three times, as summarized in **Table 3** below:

Table 3: Modifications made to Cooperative Agreement in Year Three

| Date | Mod # | Purpose |
|------------|-------|---|
| 12/17/2015 | 06 | The purposes of this modification are to: <ul style="list-style-type: none"> • Realign the Cooperative Agreement (CA) budget; • Revise submission requirement for Quarterly Progress Reports; • Revise the key personnel provisions. |
| 03/22/2016 | 07 | The purpose of this modification is to provide incremental funding. |
| 08/29/2016 | 08 | The purposes of this modification are to: <ul style="list-style-type: none"> • Increase the total estimated amount of the Cooperative Agreement by \$1,283,339, from \$6,076,168 to 7,359,507; • Revise the program description by eliminating transitional award and adding activities for year four of the EC-LEDS program; • Realign the Cooperative Agreement budget; • Provide incremental funding in the amount of \$1,283,339 increasing total obligated amount from \$6,076,168 to 7,359,507; • Add the fiscal data; • Revise Section A.6 “Performance Monitoring and Reporting Requirements” by adding the monthly reporting requirements. |

iii. *Personnel*

By the end of year three, in September 2016, EC-LEDS started negotiations with two technical consultants that will be hired in year four for the implementation of the EC-LEDS Program Component 3.

C. Year Four Implementation Plan

The EC-LEDS year four Implementation Plan was approved on September 22, 2016.

D. Deliverables and Products Submitted During Year Three

During year three of the program, the deliverables listed below were provided to USAID.

Table 4: Summary of Year Three Deliverables

| Component | Title/Description | Date submitted to USAID |
|--------------------------|---|--------------------------------|
| Component 1 | Report on Updated List of Potential Municipalities According to Selection Criteria | 30-Oct-15 |
| M&E | GIS Data Collection Template - Year Two | 30-Oct-15 |
| All | EC-LEDS Annual Progress Report | 30-Oct-15 |
| Public Outreach | EC-LEDS National Communications Plan _ Revised (Year Three) | 30-Nov-15 |
| All | EC-LEDS Year Three Work Plan | 07-Dec-15 |
| Public Outreach | National Communications Plan (Year Three) | 23-Dec-15 |
| All | EC-LEDS Annual Progress Report | 30-Dec-15 |
| All | EC-LEDS Quarterly Progress Report - Year Three Quarter One | 29-Jan-16 |
| Component 1 | Workshop Report Tbilisi November 2015 | 29-Jan-16 |
| Public Outreach | Community Based Social Marketing Campaign Design Report | 29-Jan-16 |
| M&E | GIS Data Collection Template - Year Three, Quarter One | 12-Feb-16 |
| Component 3 | Memo on Updated MARKAL-Georgia Model | 29-Feb-16 |
| Component 3 | Memo on the Mitigation Measures for MARKAL-Georgia | 29-Feb-16 |
| Component 1 | Grant Selection Memo - Round Two | 29-Feb-16 |
| Component 1 | Grant Selection Memo | 10-Mar-16 |
| Component 1 | EC-LEDS Request for Grant Approvals | 22-Mar-16 |
| Component 1 | Sustainable Energy Action Plan for Bolnisi (Geo) | 31-Mar-16 |
| Public Outreach | Media Coverage Report _ March 2016 | 31-Mar-16 |
| Component 3 | Memo on Selection of Mitigation Measures for Each Energy/MARKAL Sector and Characterization of Mitigation Measures Parameters for Georgia's Context | 31-Mar-16 |
| M&E | GIS Data Collection Template - Year Three, Quarter Two | 25-Apr-16 |
| All | Quarterly Progress Report Jan-Mar 2016 | 25-Apr-16 |
| Component 1 | Workshop Report - "Monitoring of implementation of Sustainable Energy Action Plans (Based on Example of Monitoring Report of Tbilisi Sustainable Energy Action Plan (SEAP)) | 25-Apr-16 |
| Component 1 | Sustainable Energy Action Plan for Akhaltsikhe (Eng.) | 25-Apr-16 |
| Environmental Compliance | Environmental Review Checklist for Identifying Potential Environmental Impacts of Project Activities and Processes for Heidelberg Cement Georgia CM3 Research and Renovation in Rustavi | 26-Apr-16 |
| Component 3 | Updated MARKAL-Georgia BAU Scenario | 28-Apr-16 |

| Component | Title/Description | Date submitted to USAID |
|------------------|---|--------------------------------|
| Component 3 | An updated version of the "Updated MARKAL-Georgia BAU Scenario" | 11-May-16 |
| Component 1 | Monitoring Report on the Implementation of City of Tbilisi Sustainable Energy Action Plan | 18-May-16 |
| Component 1 | Sustainable Energy Action Plan for Bolnisi (Eng.) | 31-May-16 |
| Component 1 | Sustainable Energy Action Plan for Tbilisi (Eng) | 31-May-16 |
| Component 1 | Tbilisi Project Proposal (Eng) | 31-May-16 |
| Component 1 | Project Proposal for Bolnisi (Eng.) | 31-May-16 |
| Component 3 | MARKAL-Georgia Mitigation Measures Report | 31-May-16 |
| Component 3 | Overview of Each Sector Considered in MARKAL (Energy, Transport, Industry, Building) Developed Including Trend Analysis | 31-May-16 |
| Component 1 | Sustainable Energy and Climate Action Plan of the Municipality of Telavi Community (Geo) | 29-Jun-16 |
| Public Outreach | Report on EC-LEDS Youth Energy Efficiency Events Dec 2015_Apr 2016 | 29-Jun-16 |
| All | EC-LEDS Quarterly Progress Report Apr-Jun 2016 | 28-Jul-16 |
| M&E | GIS Data Collection Template Apr-Jun 2016 | 28-Jul-16 |
| Public Outreach | Report on Findings of Kutaisi CBSM Pilot Campaign June 2016 | 29-Jul-16 |
| Component 1 | Project Proposal for Bolnisi | 29-Jul-16 |
| Component 1 | Sustainable Energy and Climate Action Plan of the Municipality of Self-Governing Community (Eng) | 05-Aug-16 |
| Component 1 | Project Proposal for Pshaveli Village (Eng.) | 05-Aug-16 |
| Public Outreach | EC-LEDS Community-Based Social Marketing Campaign Design Report for Zugdidi (Draft) | 24-Aug-16 |
| Component 1 | EC-LEDS Sustainable Energy Action Plan for Mtskheta_draft (Geo) | 27-Aug-16 |
| Component 1 | Project Proposal for Mtskheta (Geo) | 27-Aug-16 |
| Component 1 | Workshop Report Greenhouse Gas (GHG) Inventory, Business as Usual (BAU) Projections and Mitigation Measures | 19-Sep-16 |
| Component 1 | Municipal Emission Inventory, Projection and Mitigation Planning Tool (muni-EIPMP) | 19-Sep-16 |
| Component 1 | MARKAL_Georgia Guidebook for BAU Scenario Development | 28-Sep-16 |
| Component 1 | LEDS Document 4 Chapters Covering 4 Sectors of Economy: Energy, Transport, Buildings and Industry | 28-Sep-16 |
| M&E | Datasets as per Open Data Policy | 30-Sep-16 |
| Public Outreach | Report on EC-LEDS PWD Youth Energy Efficiency Event in Tbilisi | 30-Sep-16 |

| Component | Title/Description | Date submitted to USAID |
|------------------|--|--------------------------------|
| Component 1 | Project Proposal for Mtskheta (Eng.) | 30-Sep-16 |
| Component 1 | EC-LEDS Sustainable Energy Action Plan for Mtskheta (Geo) | 30-Sep-16 |
| Component 1 | EC-LEDS Sustainable Energy Action Plan for Mtskheta (Eng.) | 30-Sep-16 |
| Component 1 | Memo on Establishment Sustainable Offices | 30-Sep-16 |

E. Lessons Learned

i. Adapting to an Ever-changing Legislative Environment

As stated above, EC-LEDS prepared an assessment of a legal framework and recommended to establish SEOs as structural units of the Municipality, with the aim for the municipality to later spin-off these structural units, as partially or wholly municipally owned ltd-s.

However, due to legal and financial constraints, municipalities were not able or willing to establish SEOs according to the recommended form. Because of this, EC-LEDS started working with municipalities to identify optimal ways to perform SEO functions, and achieved consensus with municipalities to integrate SEO functions into their economic departments. EC-LEDS drafted respective amendments to the economic departments' charters and asked municipalities to make the changes to their economic departments.

While success was achieved in some cases, namely Akhaltsikhe, where the municipality established a standalone unit; Batumi and Tbilisi, where proposed amendments to the charters of economic departments were adopted, EC-LEDS was not able to achieve success in cases of Kutaisi and Zugdidi, where municipalities preferred to delay the process of making the amendments until after elections.

This interaction with municipalities proved that it is extremely difficult to achieve the desired results where the decision lies only with the beneficiary, and there is little to no leverage with the implementer to influence the beneficiary's decisions. While significant efforts were made to increase the municipalities' understanding of the importance of the issues, and efforts were extended to increase capacity of municipal staff, the program still was not able to achieve a satisfactory outcome within the given timeframe.

IV. PROGRAM PROGRESSTOWARD INDICATORS

Indicators:

The indicators with year three targets include outcome indicators OC2, OC3, OC4, OC5, OC6, OC7, and OC8; and output indicators OPI, OP2, OP4, OP5, OP6, OP7, OP8, OPI0, OPI1, OPI3, OPI4, OPI5, OPI7, OPI8, and OP22. During year three, progress was demonstrated in most of the indicators and some of them even exceeded defined targets. During Quarter one of year three, OC7 (Expected Lifetime Energy Saving) and OC8 (Projected GHG emission reduction up to 2030) were added to the Performance Monitoring Plan as requested by USAID (as per amendment). In these particular cases, Lead and Lag indicators were applied. More specifically, during any effort to reduce emissions and generate energy savings there is a lead time for project development and lag time for project implementation. Therefore, it was recommended to apply Lead and Lag indicators to capture the reality of reducing GWh and CO₂ emissions. Noteworthy in that indicators can be broadly classed into two types of measures: end-of-process measures, otherwise known as lagging indicators, or in-process measures, also known as leading indicators. Most energy programs will contain both types of measures. Therefore, in order to accurately account Energy Saving (GWh) and reduction in GHG emissions (tCO₂e), EC-LEDS proposed using lead indicator measurement and received respective approval from USAID. As an outcome of this discussion, OC7 and OC8 are calculated based on estimated lifetime energy savings/GHG reduction as a result of planned measures indicated in developed SEAPs, identified and potential grant projects, and LEDS. In the case of LEDS, the scenario is applied, which estimates energy saving at 15% of energy sector from BAU. New targets were defined for year three and respective Reference Sheets were developed and agreed with USAID.

On November 3rd, 2015, Winrock Georgia submitted a letter to USAID regarding possible targets for OC8. We calculated expected GHG emission reduction by 2030 disaggregated by years. In particular, we accounted the data, which was extracted from seven SEAPs (Kutaisi, Batumi, Zugdidi, Telavi, Tbilisi, Akhaltsikhe, Gori), LEDS (15% scenario) as these were the planned measures that were identified in FY15. Furthermore, EC-LEDS was intending to develop SEAPs for Bolnisi, Telavi (not the city) and Mtskheta municipalities in year three and considering the nature of the stated municipalities (rural type, while the previous SEAPs were focused on urban settings), it was difficult to estimate projected GHG emission reduction. However, in close collaboration with Remissia, we managed to calculate projected GHG emission reduction by 2030 applying scientifically sound methodology developed by Joint Research Center (JRC), which measures GHG emission reduction by capita for Georgia. The number equals to 1.582 TCO₂e (http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts_pcl1990-2013). The total population of Bolnisi, Telavi and Mtskheta municipalities comes to 144,500 people. Therefore, expected GHG emission reduction from the above-mentioned 3 SEAPs was calculated at 228,599.00 TCO₂e. These calculations were very rough, and exact numbers would have been identified when the SEAPs were expanded. At the end of year three, all three SEAPs were concluded, therefore EC-LEDS is able to provide more accurate estimates on projected GHG reductions for FY16. It turned out the actual numbers are lower than the targets calculated applying JRC methodology. In addition, year three target envisioned projected the GHG emission reduction amount within LEDS counting on the 15% scenario, and the number has not been changed. As for GHG emission reduction from grant projects, accurate estimates are provided in table below. The same logic applies to OC7.

It should be noted, that the targets for indicators *OC6: Percentage of individuals reached by the public awareness campaign who take at least one energy saving action* and *OP7: Number of households/businesses/public institutions implementing energy efficiency measures as a result of USG assistance (# HHs, # businesses, # institutions)* were achieved; however, the actual achievements can be estimated at the end of the project evaluation due to the nature of the indicators themselves.

Moreover, on June 1, 2016, Winrock received an official letter from USAID which indicated the intention of the donor to cancel activities related to preparing implementation of the transitional

award of the EC-LEDS program. Therefore, the target for *OC5: Number of local organizations positioned to receive USG funding and implement USG projects as a result of EC-LEDS assistance* has not been achieved.

Open Data Policy

During year three EC-LEDS submitted all datasets to AOR for review within the Open Data Policy. After receiving clearance from the donor, all files were uploaded on the Development Center website. In addition, all intellectual outputs were uploaded on the Development Experience Clearinghouse (DEC). Additionally, by request of the USAID-funded Government for Growth (G4G) program, EC-LEDS conducted an information session on the requirements of Open Data Policy for their staff. Winrock shared its own experience on submitting datasets to USAID and the procedures outlined in ADS 579.

At the end of each quarter, GIS data collection template was filled out and submitted to USAID.

Table 5 below summarizes program achievements outlined in two tables: 1) Summary of achievements and 2) details regarding year three indicators with respective activities.

Table 5: Status of Project Indicators

| Indicator | Type | Total Cumulative Actual (Y1+Y2+Y3) | Total Cumulative Target (Y1+Y2+Y3) | Y3 Target | LOP Target |
|---|---------|------------------------------------|------------------------------------|---------------|------------|
| OC2: Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO ₂ equivalent (CO ₂ e), reduced or sequestered as a result of USG assistance | Outcome | 0 | 43,000 | 55,000 | 236,000 |
| OC3:Energy saved due to energy efficiency/conservation projects as a result of USG assistance | Outcome | 0 | 62,000 | 75,000 | 315,000 |
| OC4:Value of private sector clean energy investments | Outcome | 46.40 | 4 | 3.64 | 14 |
| OC5: Number of local organizations positioned to receive USG funding and implement USG projects as a result of EC-LEDS assistance | Outcome | 0 | 0 | 1 | 1 |
| OC6:Percentage of individuals reached by the public awareness campaign who take at least one energy saving action | Outcome | 0 | 10% | 10% | 10% |
| OC7: Expected lifetime energy savings from energy efficiency or energy conservation, as a result of USG assistance (OC7) | Outcome | 64,823,523.16 | 19,929,600.00 | 44,583,406.65 | |
| OC8:Projected greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to clean energy as supported by USG assistance | Outcome | 1,822,571.14 | 1,699,549.70 | 3,237,402.00 | |
| OPI:Number of low emission development plans developed and/or implemented as a result of USG assistance (LEDS, SEAP, other) | Output | 10 | 10 | 3 | 10 |

| Indicator | Type | Total Cumulative Actual (Y1+Y2+Y3) | Total Cumulative Target (Y1+Y2+Y3) | Y3 Target | LOP Target |
|---|-------------|---|---|------------------|-------------------|
| OP2: Number of Sustainable Energy Offices (SEOs) or regional Sustainable Energy Resource Centers established in participating municipalities | Output | 3 | 3 | 2 | 5 |
| OP4: Number of stakeholders using climate information in their decision-making as a result of USG assistance. | Output | 22 | 14 | 2 | 16 |
| OP5: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change mitigation officially adopted or implemented/proposed with USG assistance | Output | 11 | 2 | 1 | 3 |
| OP6: Number of climate change mitigation tools, technologies or methodologies developed, tested and/or adopted as a result of USG assistance | Output | 2 | 2 | 2 | 2 |
| OP7: Number of households/businesses/public institutions implementing energy efficiency measures as a result of USG assistance (# HHs, # businesses, # institutions) | Output | 0 | 500 | 1000 | 1500 |
| | | 1 | 2 | 8 | 10 |
| | | 18 | 2 | 8 | 10 |
| OP8: Number of climate change mitigation projects implemented as result of USG assistance | Output | 10 | 5 | 15 | 20 |
| OP10: Number of individuals reached through outreach campaigns | Output | 521,552 | 500,000 | 250,000 | 1,000,000 |

| Indicator | Type | Total Cumulative Actual (Y1+Y2+Y3) | Total Cumulative Target (Y1+Y2+Y3) | Y3 Target | LOP Target |
|---|-------------|---|---|------------------|-------------------|
| OP 11: Number of USG-supported training or activities that contribute to building the EE knowledge and skills in the GOG, Municipalities, industry and other stakeholders | Output | 53 | 36 | 14 | 50 |
| OP13: Value of grants disbursed as a result of USG assistance for scientific research and energy efficiency pilot projects | Output | \$ 331,773.00 | \$ 500,000.00 | \$ 168,227.00 | \$ 500,000.00 |
| OP14: Number of promotional plans and campaigns implemented to increase awareness of citizens about energy efficiency | Output | 2 | 2 | 2 | 2 |
| OP15: Number of beneficiaries receiving improved infrastructure services due to USG assistance | Output | 18 | 1 | 2 | 3 |
| OP17: Number of MRV plans developed to track the impact of SEAP implementation | Output | 10 | 7 | 3 | 10 |
| OP18: Number of individuals at national and local level trained in climate change as a result of USG assistance | Output | 457 | 50 | 20 | 70 |
| OP22: Number of decisions made by LEDES steering committee or involved agencies using analysis based on MARKAL or other appropriate tools | Output | 2 | 0 | 2 | 2 |

| INDICATOR TITLE: Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO₂ equivalent (CO₂e), reduced or sequestered as a result of USG assistance (OC 2) | | | | | | | | | |
|---|--------------------------------|--------|----------|--------|----------|--------|----------|----------------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| Metric tons of CO ₂ | Geographic Location | | Event | | | Date | | total | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| | Metric tons of CO ₂ | 0 | 20,000 | 0 | 43,000 | 55,000 | 236,000 | | |

| INDICATOR TITLE: Energy saved due to energy efficiency/conservation projects as a result of USG assistance (OC 3) | | | | | | | | | | |
|--|-----------------------|--------|----------|--------|----------|--------|----------|----------------|----------|--|
| UNIT: GW/h _e | DISAGGREGATE BY: None | | | | | | | | | |
| | Geographic Location | | | Event | | Date | | total | | |
| | | | | | | | | | | |
| Results: | | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2 | | Y3 | | End of Project | | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved | |
| | GW/h _e | 0 | 20,000 | | 42,000 | | 75,000 | | 315,000 | |

| INDICATOR TITLE: Number of private sector clean energy investments (OC 4) | | | | | | | | | |
|--|-----------------------|--|----------|--------|------------|-------------|----------------|----------------|----------|
| UNIT: USD | DISAGGREGATE BY: None | | | | | | | | |
| | Geographic Location | Event | | | Date | | total | | |
| | Tbilisi, Georgia | EBRD Investment in Bust Fleet in Tbilisi | | | June, 2016 | | 37 M USD | | |
| | | Leverage from grant projects | | | year three | | 5,099, 132 USD | | |
| | SUDeP kindergartens | | | | | 910,000 USD | | | |
| Results: | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| | USD Million | 0 | 0 | 0 | 4.0 | 3.36 | 3.64 | 43,009, 132 | 14 |

| INDICATOR TITLE: Number of local organizations positioned to receive USG funding and implement USG projects as a result of EC-LEDS assistance (OC 5) | | | | | | | | | |
|---|--|---------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| UNIT: USD | DISAGGREGATE BY: <i>Region or Municipality</i> | | | | | | | | |
| | <i>Geographic Location</i> | <i>Event</i> | | | <i>Date</i> | | <i>total</i> | | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| | USD Million | 0 | 0 | 0 | 0 | 1 | | 1 | |

| INDICATOR TITLE: Percentage of individuals reached by the public awareness campaign who take at least one energy saving action (OC 6) | | | | | | | | | |
|---|-----------------------|--------|----------|--------|----------|--------|----------|----------------|----------|
| UNIT: % of individuals | DISAGGREGATE BY: None | | | | | | | | |
| | Geographic Location | | Event | | Date | | total | | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| | 0 | 0 | 0 | | | 10% | | 10% | |

| INDICATOR TITLE: Expected lifetime energy savings from energy efficiency or energy conservation, as a result of USG assistance (OC 7) | | | | | | | | | |
|--|---------------------------------|-------------------|----------|------------|------------|--------------------------|------------------|----------------|----------|
| UNIT: Gigajoules (Gj) | DISAGGREGATE BY: None | | | | | | | | |
| | Geographic Location | Event | | | Date | | total | | |
| | | LEDS 15% scenario | | | year one- | | 44 211 600.00 Gj | | |
| | | 10 Grant projects | | | year three | | 126962.064 Gj | | |
| | Bolnisi, Mtskheta, Telavi SEAPs | | | | | 555361.092 Gj | | | |
| | | | | | | Total - 44,893,923.16 Gj | | | |
| Results: | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| | 0 | 0 | 0 | 19 929 600 | 19 929 600 | 44,583,406.65 | 44,893,923.16 | | |

INDICATOR TITLE: Projected greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to clean energy as supported by USG assistance (OC 8)

| | | | | |
|--------------------------------|-----------------------|---|------|--|
| UNIT: | DISAGGREGATE BY: None | | | |
| Metric tons of CO ₂ | Geographic Location | Event | Date | total |
| | | LEDS 15% scenario 10 Grant projects Bolnisi, Mtskheta, Telavi SEAPs | | 2,988,803 TCO ₂ 34,140,44 TCO ₂ 88,771 TCO ₂ Total 123,021.44 TCO ₂ |

Results:

| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
|---|----------|--------|----------|-------------|-------------|-------------|------------|----------------|----------|
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| | 0 | 0 | 0 | 1,699,549.7 | 1,699,549.7 | 3,237,402.0 | | | |
| | 0 | 0 | 0 | | | 0 | 123,021.44 | | |

| INDICATOR TITLE: Number of low emissions development plans developed and/or implemented as a result of USG assistance (LEDS, SEAP, other) (OP 1) | | | | | | | | | |
|---|--|---------------|-------------------------------|---------------|---------------------|---------------|-----------------|-----------------------|-----------------|
| UNIT: | DISAGGREGATE BY: <i>Phase of implementation (developed, implemented)</i> | | | | | | | | |
| No. of Plans developed | <i>Geographic Location</i> | | <i>Event</i> | | <i>Date</i> | | <i>total</i> | | |
| | Bolnisi | | SEAP for Bolnisi Municipality | | January-March, 2016 | | 1 | | |
| | Telavi | | SEAP Telavi Temi | | April-June, 2016 | | 1 | | |
| | Mtskheta | | SEAP Mtskheta | | September, 2016 | | 1 | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Plans developed | 0 | 3 | 3 | 4 | 4 | 3 | 3 | 10 | |

| INDICATOR TITLE Number of Sustainable Energy Offices (SEOs) or shared Sustainable Energy Resource Centers established in participating municipalities(OP 2) | | | | | | | | | |
|--|--|---------------|--------------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| UNIT: | DISAGGREGATE BY: <i>New offices, ongoing offices</i> | | | | | | | | |
| No. of Sustainable Energy Offices/ Sustainable Energy Resource Centers established | <i>Geographic Location</i> | | <i>Event</i> | | <i>Date</i> | | <i>total</i> | | |
| | Akhaltsikhe | | SEO in Akhaltsikhe | | June, 2016 | | 1 | | |
| | Batumi | | SEO Batumi | | Sept, 2016 | | 1 | | |
| | Tbilisi | | SEO Tbilisi | | Sept, 2016 | | 1 | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Offices created | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 5 | |

| INDICATOR TITLE: Number of stakeholders using climate information in their decision making as a result of USG assistance (OP 4) | | | | | | | | | |
|--|-----------------------|--------|-------------------------------|--------|----------|--------|----------|----------------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| Number of Stakeholders | Geographic Location | | Event | | Date | | total | | |
| | | | Two governmental Institutions | | | | 2 | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Stakeholders | 0 | 8 | 12 | 6 | 8 | 2 | 2 | 16 | |

| INDICATOR TITLE: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change mitigation officially proposed, adopted, or implemented as a result of USG assistance (OP 5) | | | | | | | | | |
|---|-----------------------|------------|------------|------------|----------|-----------|----------|----------------|------------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| Number of Laws, Policies, Strategies | Geographic Location | Event | | Date | | total | | | |
| | | 10 SEAPs | | Year three | | 10 | | | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Laws, Policies, Strategies | 0 | 1 proposed | 1 proposed | 1 proposed | | 1 adopted | 10 | 1 adopted | 2 proposed |

| INDICATOR TITLE: Number of climate change mitigation tools, technologies or methodologies developed, tested and/or adopted as a result of USG assistance (OP 6) | | | | | | | | | |
|--|-----------------------|--------|----------|--------|----------|--------|----------|----------------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| Number of Tools | Geographic Location | | Event | | Date | | total | | |
| | | | | | | | | 1 | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Tools | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 5 | |

INDICATOR TITLE: Number of households/ business/ public institutions implementing energy efficiency measures as a result of USG assistance (OP 7)

| | | | | | |
|--|---|-----------------------------|-------------------|--|--|
| UNIT: | <i>DISAGGREGATE BY: None HH, Businesses, Institutions</i> | | | | |
| No. of electricity consumers implementing energy efficiency measures | <i>Geographic Location</i> | <i>Event</i> | <i>Date</i> | | <i>total</i> |
| | | <i>Sub-grant recipients</i> | <i>year three</i> | | <i>18- Public Institutions</i> <i>1- Business</i> |

Results:

| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Households | | | | 500 | | 1000 | | 1500 | |
| | 0 | | | | | 8 | | 10 | |
| | | 0 | 0 | 2 | | | | | |
| No. of businesses | 0 | | | | | | 1 | | |
| No. of institutions | 0 | | | 2 | | 8 | 18 | 10 | |

| INDICATOR TITLE: Number of climate change mitigation projects implemented as a result of USG assistance (OP 8) | | | | | | | | | |
|--|------------------------|--------------------------------------|--|--------|----------|------------|----------|----------------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| No. of climate change mitigation projects | Geographic Location | | Event | | | Date | | total | |
| | For all municipalities | | Kutaisi “Torpedo” –“ Installation of Solar Thermal System and Lighting” | | | | | 2 | |
| | Batumi | | Tbilisi Elderly house–“ Installation of Solar Thermal System and Lighting” | | | | | 1 | |
| | Batumi | | Street Lighting in Batumi | | | | | 1 | |
| | Batumi | | Public Park in Batumi | | | June, 2016 | | 1 | |
| | Zugdidi | | Street Lighting in Zugdidi | | | | | 1 | |
| | Rustavi | | Low Emission Demonstration Project for Supporting of CoM Signatory Rustavi City in the Implementation of SEAP in Rustavi | | | June, 2016 | | 1 | |
| | Rustavi | | Heidelberg Cement Georgia CM3 Research and Renovation (Rustavi) | | | June, 2016 | | 1 | |
| Telavi | | Green Recreation Zone in Telavi City | | | | | 1 | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Projects | 0 | 0 | 0 | 5 | 2 | 15 | 8 | 20 | |

INDICATOR TITLE: Number of individuals reached through outreach campaigns (OP 10)

| | | | | |
|-----------------------|---|---|--------------------------------------|--------------------------------------|
| UNIT: | <i>DISAGGREGATE BY: None</i> | | | |
| Number of Individuals | <i>Geographic Location</i> | <i>Event</i> | <i>Date</i> | <i>total</i> |
| | Village Misaktsieli, Georgia | Youth EE Event Presentation “How to Save Energy” | December 15, 2015 | 22 female, 21 male (43 total) |
| | | Contest “Energy Efficiency Is A Smart Choice” People reached through EC-LEDS Facebook | October-December, 2015 | 2585 likes on Facebook |
| | Mtskheta, Georgia | Youth EE Event “How to Save Energy -Contest Energy”- Contest Efficiency Is A Smart Choice” People reached through EC-LEDS Facebook | March 23, 2016 | 24 female, 17 male (total 41) |
| | | | January-March, 2016 | 3230 likes on Facebook |
| | Rustavi, Georgia | Youth EE Event “Seminar How To Save Energy Contest Energy Efficiency Is A Smart Choice” | April, 2016 | 13 female, 21 male (34 total) |
| | | | 10 females, 8 male (18 total) | |
| Tbilisi | PWD Youth EE Event (Tbilisi Public School #202/Boarding House for Blind Children) | September, 2016 | | |

Results:

| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Individuals | 0 | 250,000 | 254,157 | 500,000 | 264,047 | 250,000 | 254175 | 1 million | |

| INDICATOR TITLE: Number of USG-supported training or activities that contribute to building the EE knowledge and skills in the GOG, Municipalities, industry and other stakeholders (OP 11) | | | | |
|---|----------------------------|---|-------------------|-------|
| UNIT: | DISAGGREGATE BY: None | | | |
| Number of Training activities | Geographic Location | Event | Date | total |
| | <i>Village Misaktsieli</i> | <i>Youth EE Event Presentation “How to Save Energy”</i> | December 15, 2015 | 1 |
| | <i>Bolnisi</i> | <i>Meeting with local experts and municipality staff on Covenant of Mayors and SEAPs</i> | November 20, 2015 | 1 |
| | <i>Tbilisi</i> | <i>Preparation of project proposals for the GHGs mitigation measures to be implemented in the sectors considered in SEAPs</i> | November 27, 2015 | 1 |
| | <i>Telavi</i> | <i>Meeting with Deputy Governor and coordinators on Covenant of Mayors and SEAPs</i> | December 2, 2015 | 1 |
| | <i>Bolnisi</i> | <i>Meeting with local farmers and staff of Bolnisi Municipality</i> | February 19, 2016 | 1 |
| | <i>Telavi</i> | <i>Meeting with staff of Telavi Municipality</i> | March 3, 2016 | 1 |
| | <i>Tbilisi</i> | <i>Training on SEAP Monitoring</i> | March 31, 2016 | 1 |
| | <i>Mtskheta</i> | <i>Youth EE Event Presentation “How to Save Energy”</i> | March 23, 2016 | 1 |
| | <i>Rustavi</i> | <i>Youth EE Event “Seminar How To Save Energy Contest Energy Efficiency Is A Smart Choice”</i> | April 20, 2016 | 1 |
| | <i>Telavi</i> | <i>The 1st working meeting with the representatives of Telavi Municipality to discuss and agree the mitigation measures for transport and building sectors for TELAVI SECAP document</i> | April 4, 2016 | 1 |
| | <i>Telavi</i> | <i>The 2st working meeting with the representatives of Telavi Municipality to discuss and agree the mitigation measures for waste, greening and street lighting sectors for TELAVI SECAP document</i> | April 22, 2016 | 1 |
| | | <i>The final working meeting with the representatives of Telavi Municipality to discuss and agree technical details, format and measures for TELAVI</i> | | 1 |

| | | | |
|----------|---|-----------------------|---|
| Telavi | <u>SECAP document</u> | <u>May 23, 2016</u> | I |
| Mtskheta | <u>The working meeting with the Mayor of Mtskheta and SEAP coordinator to give general information about the CoM, SEAP elaboration process and technical assistance</u> | <u>April 12, 2016</u> | I |
| Mtskheta | <u>The working meeting with the SEAP coordinator and local expert to discuss the details of energy audit and collection of other relevant information for SEAP.</u> | <u>May 10, 2016</u> | I |
| Tbilisi | <u>The transport sub-working group meeting on transport chapter for LEDSDocument</u> | <u>April 8, 2016</u> | I |
| Tbilisi | <u>The industry sub-working group meeting on transport chapter for LEDSDocument</u> | <u>April 13, 2016</u> | I |
| Tbilisi | <u>The building sub-working group meeting on transport chapter for LEDSDocument</u> | <u>April 18, 2016</u> | I |
| Tbilisi | | <u>May 18, 2016</u> | I |
| Tbilisi | <u>Industry sub-working group meeting on industry chapter for LEDSDocument</u> | <u>July 12, 2016</u> | I |
| Tbilisi | <u>The transport sub-working group meeting on transport chapter for LEDSDocument</u> | | |
| Tbilisi | <u>The energy sub-working group meeting on energy chapter for LEDSDocument</u> | <u>July 15, 2015</u> | I |
| | | <u>July 21, 2016</u> | I |
| Tbilisi | <u>The building sub-working group meeting on transport chapter for LEDSDocument</u> | <u>July 28, 2016</u> | I |

Results:

| Additional Criteria | Baseline | Y1 | | Y2 | | | | End of Project | |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| <i>If other criteria are important, add lines for setting targets and tracking</i> | | | | | | | | | |
| No. of Training activities | 0 | 6 | 10 | 30 | 22 | 14 | 19 | 50 | |

| INDICATOR TITLE: Value of grants disbursed as a result of USG assistance for scientific research and energy efficiency pilot projects (OP 13) | | | | | | | | | |
|---|------------------------|--------------------------------------|--|-----------|-----------------|------------|-----------------------|---------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| Value of grants distributed | Geographic Location | | Event | | | Date | | Total | |
| | For all municipalities | | Kutaisi “Torpedo” –“ Installation of Solar Thermal System and Lighting” | | | | | | |
| | Batumi | | Tbilisi Elderly house–“ Installation of Solar Thermal System and Lighting” | | | | | | |
| | Batumi | | Street Lighting in Batumi | | | | | | |
| | Batumi | | Public Park in Batumi | | | June, 2016 | | | |
| | Zugdidi | | Street Lighting in Zugdidi | | | | | | |
| | Rustavi | | Low Emission Demonstration Project for Supporting of CoM Signatory Rustavi City in the Implementation of SEAP in Rustavi | | | June, 2016 | | | |
| | Rustavi | | Heidelberg Cement Georgia CM3 Research and Renovation (Rustavi) | | | | | | |
| Telavi | | Green Recreation Zone in Telavi City | | | June, 2016 | | | | |
| Bolnisi | | Bolnisi Solar Farm | | | September, 2016 | | | | |
| Results: | | | | | | | | | |
| Additional Criteria | Baseline | Y1 | | Y2 | | Y3 | End of Project | | |
| If other criteria are important, add lines for setting targets and tracking | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| Value of grants | 0 | 0 | 0 | 300,000 | \$175,012 | 324,988 | 196,721 | 500,000 | |

| INDICATOR TITLE: Number of promotional plans and campaigns implemented to increase awareness of citizens about energy efficiency (OP 14) | | | | | | | | | |
|--|-----------------------|--------|-------------------------------|--------|----------|--------|----------|----------------|----------|
| UNIT: | DISAGGREGATE BY: None | | | | | | | | |
| No. of Plans | Geographic Location | | Event | | Date | | total | | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Plans | 0 | 2 | 2 (Implementation Ongoing) | 2 | 2 | 2 | 2 | 2 | 2 |

| INDICATOR TITLE: Number of beneficiaries receiving improved infrastructure services due to USG assistance (OP 15) | | | | | | | | | |
|--|---|---------------|---|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| <i>UNIT:</i> | <i>DISAGGREGATE BY: None</i> | | | | | | | | |
| No. of beneficiaries receiving improved infrastructure services | <i>Geographic Location</i> | | <i>Event</i> | | <i>Date</i> | | <i>total</i> | | |
| | Batumi, Kutaisi, Zugdidi, Tbilisi, Rustavi, Telavi, Bolnisi, Mtskheta | | Public entities supported to implement grant projects | | year three | | 18 | | |
| <i>Results:</i> | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Beneficiaries | 0 | 0 | 0 | 1 | | 2 | 18 | 3 | |

| INDICATOR TITLE: Number of MRV plans developed to track impact of SEAPs implementation(OP 17) | | | | | | | | | |
|--|---|---|----------|--------|---------------------|--------|----------|----------------|----------|
| Unit: | Disaggregate by: None | | | | | | | | |
| No. of Plans | Geographic Location | Event | | | date | | total | | |
| | Tbilisi, Batumi, Kutaisi, Zugdidi, Gori, Telavi, Akhaltsikhe, Mtskheta, Temi Telavi Municipality and Bolnisi Municipality | MRV for Tbilisi, Batumi, Kutaisi, Zugdidi, Gori, Telavi, Akhaltsikhe, Mtskheta, Temi Telavi Municipality and Bolnisi Municipality | | | year one-year three | | 10 | | |
| Results: | | | | | | | | | |
| Additional Criteria If other criteria are important, add lines for setting targets and tracking | Baseline | Y1 | | Y2, | | Y3 | | End of Project | |
| | | Target | Achieved | Target | Achieved | Target | Achieved | Target | Achieved |
| No. of Plans | 0 | 4 | 4 | 3 | 3 | 3 | 3 | 10 | |

EC-LEDS CLEAN ENERGY PROGRAM YEAR THREE ANNUAL REPORT (OCT 2015– SEPTEMBER 2016)

INDICATOR TITLE: Number of individuals at national and local level trained in climate change as a result of USG assistance (OP18)

| UNIT: | | DISAGGREGATE BY: None | | |
|--------------------|---------------------|---|--|---------------------------|
| No. of Individuals | Geographic Location | Event | Date | total |
| | | Tbilisi | On-job training on elaboration of MARKAL for Analytical Department of Ministry of Energy and Environment | October-December, 2015 |
| | Tbilisi | Training on Preparation of project proposals for the GHGs mitigation measures to be implemented in the sectors considered in SEAPs | November 27, 2015 | 23 (12 females, 11 males) |
| | Tbilisi | Training on SEAP Monitoring | March 31, 2016 | 11 (4 females, 7 males) |
| | Tbilisi | On-job training on MARKAL-discussion on renewable model | January-March, 2016 | 5 (2 females, 3 males) |
| | Telavi | <u>The 1st working meeting with the representatives of Telavi Municipality to discuss and agree the mitigation measures for transport and building sectors for TELAVI SECAP document</u> | <u>April 4, 2016</u> | 4 (1 female, 3 males) |
| | Telavi | <u>The 2st working meeting with the representatives of Telavi Municipality to discuss and agree the mitigation measures for waste, greening and street lighting sectors for TELAVI SECAP document</u> | <u>April 22, 2016</u> | 4 (1 female, 3 males) |
| | Telavi | <u>The final working meeting with the representatives of Telavi Municipality to discuss and agree technical details, format and measures for TELAVI SECAP document</u> | <u>May 23, 2016</u> | 4 (1 female, 3 males) |
| | Mtskheta | <u>The working meeting with the Mayor of Mtskheta and SEAP coordinator to give general information about the CoM, SEAP elaboration process and technical assistance</u> | <u>April 12, 2016</u> | 2 (1 female, 1 male) |
| | Mtskheta | <u>The working meeting with the SEAP coordinator and local expert to discuss the details of energy audit and collection of other relevant information for SEAP.</u> | <u>May 10, 2016</u> | 2 (1 female, 1 male) |
| | Mtskheta | <u>The transport sub-working group meeting on transport</u> | | |

| | | | |
|---------|---|---------------------------|---------------------------|
| Tbilisi | <u>chapter for LEDS document</u> | <u>April 8, 2016</u> | 15 (5 female, 10 male) |
| Tbilisi | <u>The energy sub-working group meeting on transport chapter for LEDS document</u> | <u>April 13, 2016</u> | 11 (5 female, 6 male) |
| Tbilisi | <u>The industry sub-working group meeting on transport chapter for LEDS document</u> | <u>April 18, 2016</u> | 6 (2 female, 4 males) |
| Tbilisi | <u>The building sub-working group meeting on transport chapter for LEDS document</u> | <u>May 18, 2016</u> | 14 (4 females, 9 males) |
| | Youth EE Event “Seminar How To Save Energy Contest Energy Efficiency Is A Smart Choice” | <u>April 20, 2016</u> | 34 (13 females, 21 males) |
| Rustavi | Training on analytical tool Muni_EIPMP | | |
| Tbilisi | Industry sub-working group meeting on industry chapter for LEDS document | <u>August 30, 2016</u> | 11 (4 males, 7 females) |
| Tbilisi | The transport sub-working group meeting on transport chapter for LEDS document | <u>July 12, 2016</u> | 6 (3 females, 3 males) |
| Tbilisi | The energy sub-working group meeting on energy chapter for LEDS document | <u>July 15, 2016</u> | 10 (7 females, 3 males) |
| Tbilisi | The building sub-working group meeting on transport chapter for LEDS document | <u>July 21, 2016</u> | 15 (7 females, 8 males) |
| Tbilisi | PWD Youth EE Event (Tbilisi Public School #202/Boarding House for Blind Children) | <u>July 28, 2016</u> | 18 (7 females, 11 males) |
| Tbilisi | | <u>September 22, 2016</u> | 18 (10 females, 8 males) |

results:

| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline | Y1 | | Y2 | | Y3 | | End of Project | |
|--|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| No. of Individuals | 0 | 10 | 67 | 40 | 171 | 20 | 219 | 70 | |

| INDICATOR TITLE: Number of decisions made by LEDS steering committee or involved agencies using analysis based on MARKAL or other appropriate tools (OP22) | | | | | | | | | |
|---|---------------------------------|-----------------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------------|-----------------|
| UNIT: | | DISAGGREGATE BY: None | | | | | | | |
| Number of decisions | <i>Geographic Location</i> | | <i>Event</i> | | | <i>Date</i> | | <i>total</i> | |
| | | | | | | | | | |
| Results: | | | | | | | | | |
| Additional Criteria <i>If other criteria are important, add lines for setting targets and tracking</i> | Baseline e | <i>Y1</i> | | <i>Y2</i> | | <i>Y3</i> | | <i>End of Project</i> | |
| | | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> | <i>Target</i> | <i>Achieved</i> |
| | | 0 | 0 | 2 | | 2 | | 4 | |

Annex I: Success Story

USAID | GEORGIA

FROM THE AMERICAN PEOPLE

SUCCESS STORY

Georgia's Elderly Find Comfort in Clean Energy

“The Warm Elderly project had a strong impact on our lives. For almost 25 years, our building had inadequate heat and hot water. We had to live in severe conditions. But things changed with this project. Our comfort level significantly increased, and we are now able to spend time with each other in the hall or resting rooms, which we could have hardly imagined doing a couple of years ago. With your assistance, you have restored our dignity and pride.” —Murman Khachapuridze, retired journalist and resident of the Tbilisi Elders Boarding House.



Murman Khachapuridze and his wife live at the Tbilisi Elders Boarding House.
Irine Sulava, EC-LEDS

USAID's clean energy program brought public and private organizations together to renovate the Tbilisi Elders Boarding House with energy efficient and renewable energy solutions. Prior to the renovation, the home had high monthly energy expenses, yet did not have adequate heat to keep its residents warm in the winter or enough hot water for them to take more than two showers per week.

Director of the Tbilisi Elders Boarding House, Darjean Khachapuridze, recalls, “For a long time our tenants slept in coats, hats, and trousers, unable to visit the cold dining room—we were serving the meals in their rooms.”

Through a USAID-supported grant, the building now has a new solar hot water heating system and other energy efficiency upgrades to meet the residents' needs, save money, and help protect the environment for future generations.

The U.S. Government supports Georgia's efforts to mitigate climate change and enable more responsible management and development of Georgia's natural endowments. USAID's Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program is one such example of this commitment.

USAID | GEORGIA

FROM THE AMERICAN PEOPLE

SUCCESS STORY

When USAID/Georgia Mission Director Douglas Ball met with Mr. Khachapuridze and the other boarding house residents, he told them, “What this project is really all about is people; it’s about you, the residents of this community. We understand that the past hasn’t always been so comfortable, but we’re hoping that with clean energy, the future will only grow brighter.



New solar water heater will keep residents warm in the winter while also saving money and energy.
Irine Sulava, EC-LEDS

Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program builds the capacity of Georgian institutions to analyze greenhouse gas emissions and develop policies and actions to reduce those emissions. The program spurs investments that will reduce GHG emissions and assists municipalities to meet EU commitments under the Covenant of Mayors. As one of 20 focus countries to implement the U.S. Presidential Initiative for low emission development, Georgia has the potential to become a role model for the region.

About USAID in Georgia: *During the past 24 years, the American people, through USAID, have invested more than \$1.5 billion in Georgia. USAID projects are designed to support Georgia’s transition to a free and prosperous democracy and include initiatives to accelerate economic growth, develop democratic institutions, and improve health and education. USAID provides economic and humanitarian assistance in more than 100 countries. For more information, please visit: www.facebook.com/usaidgeorgia and www.usaid.gov/georgia.*

Annex 2: Media Plan of Airing EC-LEDS EE PSAs on National TV Channels

Table 6

| TV Channel | Airing Period | Number of Spots |
|------------|---------------------------|-----------------|
| Channel I | 10-Oct-2015 -31-Oct-2015 | 110 |
| Channel I | 03-Feb-2016 – 29-Feb-2016 | 95 |
| Imedi | 01-Feb-2016 – 29-Feb-2016 | 174 |
| Channel I | 12-Apr-2016 –22-Apr-2016 | 26 |
| Imedi | 11-Apr-2016 – 24-Apr-2016 | 35 |
| Channel I | 18-Jun-2016 – 28-Jun-2016 | 39 |

Annex 3: Media Coverage Report (November, 2015 – October, 2016)

| | |
|----------------|---|
| Source: | newspress.ge |
| Date: | November 18, 2015 |
| Title: | Presentation of the Pilot Project is planned at Tbilisi Elders' Boarding House |

On November 20th the Tbilisi Elders' Boarding House will host a presentation of the pilot project "Warm Elderly - Energy Efficiency Measures for Tbilisi Elders' Boarding House."

According to information provided by the Ministry for Economy and Sustainable Development, this is a demonstration project that includes energy efficient and renewable energy measures, such as installing an autonomous heating and hot water supply system that operates on natural gas, integrated with a solar thermal system, improving energy efficiency in the building's vulnerable outdoor zones, and replacing incandescent bulbs with fluorescent ones.

Along with the technical and economic benefits, these measures will mitigate climate change impacts. Invitees will view the Elders Boarding House and the energy efficient measures that were taken. According to the Agency, before carrying out the project, the residents of the Elders Boarding House did not enjoy the benefits of central heating—only the bedrooms were heated, but with individual electric heaters.

In this project, the Boarding House is supplied with gas and another heating system was installed. After new energy efficient technology is ready the House will be provided with central heating. All windows and doors in the building have already been insulated, and the outside walls of the building have received partial insulation; in the so-called "cold and warm areas" space separations have been installed.

In the future, more than 1000 light bulbs will be replaced with energy-efficient ones. An autonomous heating and hot water supply system operating on natural gas will be integrated with a solar thermal system. This project will significantly reduce heat loss in the building and to outdoor spaces, which will save heating costs. These measures will contribute to the comfort for those residing in the Elders' Boarding House.

By implementing these measures, savings are expected in the range of 181,600 kWh of energy, 13,900 GEL energy costs and 35,20 kg in CO₂ emissions.

The project is being implemented by Energy Efficiency Center Georgia, under the project "New Project of Renewable Energy and Energy Efficiency" and financed by BP and its partners in oil and gas businesses.

Co-financing organizations of the project are the Tbilisi Municipality City Hall, the State Fund for Protection and Assistance of Statutory Victims of Human Trafficking, the US Agency for International Development (USAID), and Winrock International Georgia within the project "Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program".

Source: newsday.ge
Date: November 20, 2015
Title: Presentation of the “Warm Elderly - Energy Efficiency Measures for Tbilisi Elders’ Boarding House” Pilot Project is Planned at Tbilisi Elders’ Boarding House

On November 20th the Tbilisi Elders’ Boarding House hosted a presentation of the pilot project “Warm Elderly - Energy Efficiency Measures for Tbilisi Elders’ Boarding House.” The project demonstration presented energy efficient and renewable energy measures with deployment of energy efficient and renewable energy solutions including the introduction of autonomous heating and a hot water supply system using natural gas combined with a solar thermal system, the energy efficiency upgrade of the most vulnerable areas of the building and the replacement of incandescent light bulbs with CFLs. The measures planned and the technical and economic benefits will mitigate climate change. Invitees will visit the Elders Boarding House and see energy efficiency measures that have been implemented.

Before this project, the residents of the Elders’ Boarding House could not enjoy the benefits of central heating as only their bedrooms were heated, with individual electrical heaters.

In this project, the Boarding House is supplied with gas and another heating system was installed. After new energy efficient technology is ready the House will be provided with central heating. All windows and doors in building have already been insulated and the outside walls of the building have received partial insulation; in the so-called “cold and warm areas” space separations have been installed.

In the future, more than 1000 light bulbs will be replaced with energy-efficient ones. An autonomous heating and hot water supply system operating on natural gas will be integrated with a solar thermal system. This project will significantly reduce heat loss in the building and to outdoor spaces, which will save heating costs. These measures will contribute to the comfort for those residing in the Elders’ Boarding House.

By implementing these measures, savings are expected in the range of 181,600 kWh of energy, 13,900 GEL energy costs and 35,20 kg CO₂ emissions. The project is being implemented by Energy Efficiency Center Georgia, under the project “New Project of Renewable Energy and Energy Efficiency” and financed by BP and its partners in oil and gas businesses.

Co-financing organizations of the project are the Tbilisi Municipality City Hall, the State Fund for Protection and Assistance of Statutory Victims of Human Trafficking, the US Agency for International Development (USAID), and Winrock International Georgia within the project “Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program.”

Source: EPN.ge
Date: November 20, 2015
Title: Pilot project “Warm Elderly” presentation was held at Elders’ Boarding House

The Tbilisi Elders’ Boarding House hosted a presentation of the project “Warm Elderly - Energy Efficiency Measures for Tbilisi Elders’ Boarding House.” The Deputy Head of the State Fund for Protection and Assistance of Statutory Victims of Human Trafficking told the Express News journalist that energy efficiency in the Elders Boarding House has been increased.

“Works related to the heating system in the Boarding House are in their final stages. Obviously the energy efficiency of the building has been increased and—with the assistance of contributing organizations and the local self-governing body-- the project is being completed. Today the building will have heating and hot water from natural gas combined with a solar energy system.

The project is a pilot scheme that includes energy efficient and renewable energy such as an autonomous heating and hot water supply system operating on natural gas, integrated with a solar thermal system. The project was implemented by Energy Efficiency Center –Georgia for the “New Project of Renewable Energy and Energy Efficiency”, and financed by BP Exploration Caspian Sea Limited, Tbilisi City Hall, the charity Fund Iavnana, and the US Agency for International Development (USAID).

The Tbilisi Elder’s Boarding House is a unit of the State Fund, where 73 beneficiaries currently live.



Source: ipress.ge
Date: **November 20, 2015**
Title: **Elderly Boarding House Director: “For 25 Years the Elderly Slept in Coats and Hats”**

The Tbilisi Elders Boarding House hosted a presentation of the project “Warm Elderly - Energy Efficiency Measures for Tbilisi Elders Boarding House.” Before the project was carried out, the Boarding House had no central heating system and bedrooms were heated with individual space heaters. All windows and doors in the building are already insulated and outside walls are partially thermally insulated as well.

Boarding House Director, told the Ipress correspondent, “Due to conditions in the Boarding House, our administration was unable to increase admissions of the elderly. Currently 75 elderly persons live in the Boarding House and 300 more are on a waiting list. Because of insufficient living conditions we could not host more beneficiaries. For 25 years this building was deprived of heat and hot water, so how can the elderly live in such conditions, when they suffer from heart, joint and other chronic conditions! I have tried for a long time to solve this problem, and finally did it--first of all with the assistance of Tbilisi’s Mayor who had promised during the pre- election period to solve this problem if he was elected-- and he has kept his promise, with help from co-financing organizations. For a long time our tenants slept in coats, hats and trousers, unable to visit the cold dining room--we were serving meals in their room

Source: CENN.org
Date: November 25, 2015
Title: “Warm Up the Elderly – Energy Efficiency Measures for Tbilisi Elders’ Boarding House”

On November 20, 2015, at the Tbilisi Boarding House for the Elderly a presentation took place on the project “Warm Elderly – Energy Efficiency Measures for Tbilisi Elders’ Boarding House.”

This multi-stakeholder project was implemented by the Energy Efficiency Center Georgia, with co-financing from BP and related companies for a “Renewable Energy & Energy Efficiency New Project”; Tbilisi City Hall; the State Fund for Protection and Assistance of (Statutory) Victims of Human Trafficking; and USAID/Winrock within its Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program (ongoing).

Invitees and guests were from the Ministry of Labor, Health and Social Affairs of Georgia, the Ministry of Energy, BP in Georgia, from USAID/Winrock, from the State Fund for Protection and Assistance of (Statutory) Victims of Human Trafficking, and officials from Tbilisi City Hall, the local district administration and the Energy Efficiency Center Georgia as well as local media.

This was a demonstration project to illustrate energy efficient and renewable energy solutions including: the introduction of autonomous heating and a hot water supply system based on natural gas combined with a solar thermal system, the energy efficiency upgrade of most vulnerable areas of the building envelope and the replacement of incandescent light bulbs with CFLs. These measures will improve the technical and economic benefits and mitigate climate change.

After the opening ceremony, guests toured the Boarding House building to view the new energy efficiency measures first hand.

Source: TV Channel Rustavi2
Date: November 25, 2015
Title: News Program Kurieri

In the light of the upcoming Paris Conference on Climate Change, the Ministry of Environment and Natural Resources and UNDP Program hosted a preparatory conference dedicated to the important issues for upcoming conference as well as to Green Climate Fund concept implementation and main priorities of this direction. The conference took place at the Tbilisi Marriott Hotel. A presentation of Georgia's Third National Communication with regard to the Convention on Climate Change was presented at this conference.

“Today all interested parties were informed about Georgia's position and proposals. We hope that the Paris Conference will be successful and that an important Agreement will be achieved on the main goals to avoid a two degree warming in the world,” said the First Deputy Minister of Environment and Natural Resources Protection.

“We have discussed Georgia's response to Climate Change. Resolving this issue is the responsibility of every citizen, and at the national level too. Georgia and the South Caucasus have faced \$30 billion financial losses over recent years due to this problem. This summer, the flood in Tbilisi was a clear example of this trouble, when around 700 people became homeless. As a result, we all have to fight together on Climate Change and the UN will continue to be your partner on this issue,” said the UNDP Deputy Resident Representative.

Source: TV Channel I
Date: November 25, 2015
Title: News Program Moambe

Climate Change Policy in Georgia – the topic was discussed at a conference recently. According to recent data Global Warming is having a negative impact on Georgia that is showing up in the natural environment. Another problem is that the Caucasus Mountain glaciers are melting which will also have a negative impact on the scale of water resources. The topic of Global Warming will be the main issue at a conference in Paris at the end of November, where Georgia will participate, along with other countries, and will commit to reducing GHG emissions on its territory.

“As you are already aware, the climate issue will be discussed at Paris Conference, where final decisions on Climate Change for next fifteen years will be agreed among participating countries. Georgia, as a responsible member of international community, will present the country's position and contribution. If Georgia refuses to accept a development model that includes using efficient energy, renewable resources, or no reduction in climate change's negative impacts, it will be difficult for us to maintain a competitive role on the international market,” said the First Deputy Minister of Environment and Natural Resources Protection.

“If you'd like to know the area where climate change is having the greatest negative impact, this is the Black Sea coast, where it is already difficult to manage the issues caused by rising sea levels with resulting erosion. The water level has risen three meters in places before but today it has reached almost six meters. The sea level in Ajara has increased by 22 cm compared to this time last century,

and if we consider the seacoast of Poti where there is also a tectonic sinking of the land, the difference reaches 70 cm,” said the Director of Sustainable Development Center *Remissia*.

Source: TV Channel Maestro
Date: November 25, 2015
Title: News Program

Climate Change Policy in Georgia and the preparation for the Paris Agreement were the topics of a conference held today. Participants discussed current projects related to climate change and talked about the country’s priorities and plans. The aim of the conference was to prepare for the conference in Paris at the beginning of December. At the Climate Conference in Paris, Georgia will be represented with a high level delegation led by the Prime Minister.

“The foremost goal for Georgia is to get financial aid, attract attention as to how it is mitigating climate change and adapting. These are important directions where we need additional investments to minimize the negative impacts of climate change,” said the First Deputy Minister of Environment and Natural Resource Protection.

“UNDP is pleased to assist the Government of Georgia in organizing this conference, and we express hope that the world’s governments will sign a legal document on climate change to address the issue,” said the UNDP Deputy Resident Representative.

Source: <https://www.facebook.com/MOEGeorgia/>
Date: November 25, 2015
Title: Climate Change Policy in Georgia

The Tbilisi Marriott Hotel hosted "Climate Change Policy in Georgia, and preparations for the Paris Agreement" with participants including the Deputy Minister of Environment and Natural Resources, and Deputy Resident Representative of UNDP in Georgia.

The aim of the conference was to inform participants about progress and issues in the field of climate change. The Paris Conference will be the occasion to prepare a Green Climate Fund and initiate a large-scale search to find the means to address the country's priorities. The conference of the Third National Communication on Climate Change Convention was held the same day, organized by Ministry of Environment and Natural Resources and the United Nations Development Programme (UNDP).

The Paris Climate Change Conference will be held in Paris in December, and will be attended by signatories of the United Nations Framework Convention on Climate Change. The Georgian delegation will be headed by the Prime Minister of Georgia.

Source: Channel 9
Date: December 9, 2015
Title: News

The Sustainable Energy Action Plan (SEAP) 2016-2020 was presented by the Akhaltsikhe City Hall at a special event attended by the regional administration, central government and non-governmental organizations.

According to Akhaltsikhe Mayor, the SEAP must be implemented within the Covenant of Mayors framework to reduce CO₂ emissions. A plan to create a sustainable development agency will be drawn up and the Akhaltsikhe outdoor lighting system will be rehabilitated. The Mayor said that implementation had already begun. NGOs were also actively involved in drawing up the Action Plan and according to the Sustainable Development Center- REMISSIA, Akhaltsikhe --like other cities-- must prepare proposals on energy efficiency, renewable energy, waste treatment and for the transport sector.

Akhaltsikhe joined the Covenant of Mayors along with other national cities on October 31, 2014. As the Mayor stated, “We took the responsibility to create our Sustainable Energy Action Plan as a first requirement. Now we will work on emission reduction measures, and decrease sources of energy consumption. This event marks the beginning of the measures and the project for those who will contribute to fulfilling these requirements.”

The Director of the Sustainable Energy Center- REMISSIA, said “Our organization has worked with the Akhaltsikhe City Hall to create the Action Plan. In addition to this document, we have worked with the Municipality on an energy efficient system for the outdoor lighting system of the Rabati Castle and on a project proposal to create Akhaltsikhe’s Sustainable Development Agency.”

Source: News Portal Samkhretis Karbtche
Date: December 9, 2015
Title: How Akhaltsikhe City Hall Plans to Save Energy

National and regional governmental agencies and NGOs participated in discussions on Akhaltsikhe's Sustainable Energy Action Plan 2016-2020. Akhaltsikhe joined Covenant of Mayors on October 31, 2014, and made certain commitments for carrying it out.

“This is the first commitment that must be made, according to the Covenant of Mayors; then we have to work on CO₂ emissions reductions. We have prepared a project to create a Sustainable Development Agency, and the energy-efficient rehabilitation of the Rabati Castle outdoor lighting system,” said Akhaltsikhe Mayor. He added that the plans have already begun to be carried out and that CO₂ emissions should be reduced by a minimum of 20% by 2020.

Several NGOs were actively involved in creating the Action Plan. In addition to Akhaltsikhe, twelve other Georgian cities have joined the Covenant. The Director of Remissia, the Sustainable Energy Center said, “Our organization works with Winrock Georgia on this project financed by the United States Agency for International Development, which helps municipalities create Sustainable Energy Action Plans. Like other cities, Akhaltsikhe must not only prepare the Action Plan, but elaborate concrete proposals to promote energy efficiency and renewable energy, waste treatment and transport sector CO₂ reductions.”

Source: Rustavi 2
Date: December 11, 2015
Title: Kurieri

The issue of hazardous emissions reductions was discussed at the Tbilisi City Hall. Tbilisi Mayor, presented results of work carried out and future plans to the Heads of City Services and subordinate bodies. In 2016 the old public bus fleet will be replaced by 150 environmentally friendly buses, a project supported by EBRD, which has allocated 30 million euro to this end.

The Tbilisi Mayor stated, “We have made efforts to reduce emissions and hazardous gases. In 2016 two new projects will be featured: the renewal of the municipal transport fleet, and the installation to collect harmful gases at the Lilo garbage landfill.”

Head of the Economic Policy Office in Tbilisi City Hall said, “Improvements will be made in the transport sector, by increasing energy efficiency of buildings and more green zones within the city area. These are key directions that will contribute to reducing CO₂ emissions 20% by 2020.”

Source: CENN Network
Date: December 11, 2015
Title: Energy Efficiency Is A Smart Choice – Youth EE Event Continues in Mtskheta-Mtianeti Region

The USAID-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program empowers youth through training on energy efficiency and renewable energy technologies. Students from the villages of Misaktsieli, Dzveli Kanda, Akhaldaba, Tsilkani, Ksovrisi, Jinvali, Tchartali and Khevsurtsopeli took part in a Youth Energy Efficiency Event on December 15, 2015 at 13:30 pm, to discuss energy efficiency contributing to climate change mitigation.

The students were selected from Momavlis Taoba (Future Generation) program partner schools in the 9th to 11th grades of Mtskheta, Mtianeti and Dusheti Municipalities in collaboration with the Mtskheta-Mtianeti Anti-Violence Committee Network of Georgia. The Committee implements the Momavlis Taoba project with 27 partner public schools in the region. The Momavlis Taoba program, funded by USAID, is being implemented in Georgia by PH International and supported by the Ministry of Education and Science of Georgia.

During the event, carried out in the Misaktsieli School, students were given a presentation on “How to Save Energy”. This was followed by a contest, “Energy Efficiency is a Smart Choice”, to demonstrate the Energy Efficiency skills acquired at the seminar. This seminar was carried out by the Dean of the Energy and Telecommunications Faculty at Georgian Technical University, Professor Gia Arabidze. Professor Arabidze described energy efficiency, ways of saving energy, the energy audit, energy efficiency in residential sectors, energy efficient technologies, simple tips to save energy at home, energy-efficient appliances, renewable energies, energy efficient/renewable energy projects carried out with donor support as well as energy efficiency and climate change. The winners received medals, and all students were given participation certificates.

The EC-LEDS Clean Energy Program is supported by USAID and implemented by Winrock International Georgia. Through this project, USAID supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy activities and enable more responsible management and development of Georgia’s natural resources.

Source: CENN Network
Date: March 23, 2016
Title: Energy Efficiency Is A Smart Choice – Youth EE Event Continues in Mtskheta-Mtianeti Region

The USAID-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program empowers youth through training on energy efficiency and renewable energy technologies. Students from the villages of Sakramuli, Sioni and Nichbisi took part in a Youth Energy Efficiency Event on March 23, 2016 at 14:00 pm, to discuss energy efficiency contributing to climate change mitigation.

The students were selected from Momavlis Taoba (Future Generation) program partner schools in the 9th to 11th grades of Mtskheta, Mtianeti and Dusheti Municipalities in collaboration with the Mtskheta-Mtianeti Anti-Violence Committee Network of Georgia. The Committee implements the Momavlis Taoba project with 27 partner public schools in the region. The Momavlis Taoba program, funded by USAID, is being implemented in Georgia by PH International and supported by the Ministry of Education and Science of Georgia.

During the event, carried out in the Misaktsieli School, students were given a presentation on “How to Save Energy”. This was followed by a contest, “Energy Efficiency is a Smart Choice”, to demonstrate the Energy Efficiency skills acquired at the seminar. This seminar was carried out by the Dean of the Energy and Telecommunications Faculty at Georgian Technical University, Professor Gia Arabidze. Professor Arabidze described energy efficiency, ways of saving energy, the energy audit, energy efficiency in residential sectors, energy efficient technologies, simple tips to save energy at home, energy-efficient appliances, renewable energies, energy efficient/renewable energy projects carried out with donor support as well as energy efficiency and climate change. The winners received medals, and all students were given participation certificates.

The EC-LEDS Clean Energy Program is supported by USAID and implemented by Winrock International Georgia. Through this project, USAID supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy activities and enable more responsible management and development of Georgia’s natural resources.

Source: Commersant.ge
Date: March 25, 2016
Title: Opening of the Energy Efficient and Energy Saving Classroom in the Tbilisi State Academy of Arts

On March 25th the Tbilisi State Academy of Arts will host the opening ceremony of Energy Efficient and Energy Saving Classroom. The classroom was completed in the framework of a Memorandum between Union of Experts Sustainable Energy and Environment, LTD Nova, Company Izocam and Tbilisi State Academy of Art.

This project was implemented with the financial support of NOVA ltd and Company IZOCAM. The goal of this activity is to showcase the energy efficient and energy saving technologies to the guests and emphasize the importance of energy efficient measures to the students of architecture, construction and energy faculties in the process of project design, construction or rehabilitation. Issues of efficient cooperation and support are under discussion among ministries, embassies and universities.

The event will be attended by Tbilisi Vice Mayor, Deputy Minister of Economy and Sustainable Development, Winrock International (USAID supported Program EC-LEDS) Chief of Part,y Marketing Director of IZOCAM and other honorable guests.

Source: CENN
Date: April 21, 2016
Title: Energy Efficiency Is a Smart Choice
Youth EE Event Continues in Kvemo Kartli

Students from Rustavi and Gardabani took part in the Youth Energy Efficiency Event on April 20, 2016. The USAID-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program empowers youth through training on energy efficiency and renewable energy technologies. The main objective is to involve youth in energy efficiency, contributing to climate change mitigation.

The students were selected from “Momavlis Taoba” (Future Generation) Civic Educational program partner schools from 9th to 11th grades in collaboration with the NGO SIQA - Georgian Association of Educational Initiatives. The “Momavlis Taoba” (MT) program, funded by United States Agency for International Development (USAID), is being implemented in Georgia by PH International and is supported by the Ministry of Education and Science of Georgia (MES). SIQA is a non-profit legal entity, which is productively functioning in Georgia and abroad since 1999. SIQA oriented on development of critical and creative thinking through informal learning among society’s members (age is unlimited), who’s motivated to positive changes, but also contribute to introducing innovative and already approved method of studying, that a person established as an active citizen, who’s oriented on self-development.

During the event, students were given a presentation “How to Save Energy” followed by a contest “Energy Efficiency Is A Smart Choice” to demonstrate the EE skills acquired at the seminar. The seminar was conducted by Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor. Professor will speak about the importance of energy efficiency, ways of saving energy, energy audit, energy efficiency in residential sector, energy efficient technologies, simple tips to save energy at home, energy efficient appliances, renewable energies, energy efficient/renewable energy projects implemented under donor support, energy efficiency and climate change. The winners were awarded medals, and all students were given participation certificates. The event took place in the Rustavi Civic Engagement Center (22, Kostava street) at 14:00. The EC-LEDS Clean Energy Program is supported by USAID and implemented by Winrock International Georgia. Through this project, USAID supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy activities, and enable more responsible management and development of Georgia’s natural endowments.

Source: Kutaisi Municipality City Council Facebook Page
Date: June 30, 2016
Title: Solar Daisy in Kutaisi

Chairman of Kutaisi City Council, Deputy Chairmen and Kutaisi Mayor attended the opening ceremony of Energy Efficient Public Park in the central-historical district of the city.

The park is equipped with benches and solar lighting. Among trees and plants, visitors of the park can observe a daisy-shaped “Solar Tree”.

The Solar Tree is equipped with various types of charging plugs attached to the stem. The system of the Solar Tree is made up of three main parts: solar panels, charging controller and accumulator. Solar panels convert solar energy into the electric energy, which is supplied to the accumulator through the charging controller, where the energy is accumulated. Presentation of the event was attended by project implementers, as well, among them, representatives of Economic Development Department of Kutaisi City Hall, USAID, Winrock International and Energy Efficiency Center - Georgia.

Source: Kutaisi City Hall Press Center
Date: June 30, 2016
Title: Energy Efficient Public Park in Kutaisi

The first “Solar Daisy” is installed in Georgia, in Kutaisi. The idea of the Solar Tree was initiated by Economic Development Service at Kutaisi City Hall. Kutaisi Mayor, Chairman of City Council, representatives of the local self-governance, USAID, Winrock International and NGO Energy Efficiency Center – Georgia observed the renovated Park. The so-called “Solar Daisy” is equipped with USB charging points. The park is equipped with benches and solar lighting. The given technological installation works on solar energy and is used as an autonomous charging point promoting the idea of living in a cleaner environment. After the opening of Kutaisi Touristic Information Center in the park, it will be equipped with free WI-FI and electronic library.



Source: psnews.ge
Date: June 30, 2016
Title: Solar Daisy in Kutaisi

The first “Solar Daisy” is installed in Georgia, in Kutaisi. The idea of the Solar Tree was initiated by Economic Development Service at Kutaisi City Hall. Kutaisi Mayor, Chairman of City, representatives of the local self-governance, USAID, Winrock International and NGO Energy Efficiency Center – Georgia observed the renovated Park. The so-called “Solar Daisy” is equipped with USB charging points. The park is equipped with benches and solar lighting. The given technological installation works on solar energy and is used as an autonomous charging point promoting the idea of living in a cleaner environment. After the opening of Kutaisi Touristic Information Center in the park, it will be equipped with free WI-FI and electronic library.



"მზის გვირილა" ქუთაისში

2016/06/30 13:34:47



საქართველოში „მზის გვირილა“ პირველად ქუთაისში დამონტაჟდა. იდეა ქუთაისის მერიის ეკონომიკური განვითარებისა და ადგილობრივი თვითმმართველობის ქონების მართვის სამსახურის ეკონომიკური განვითარების განყოფილებას ეკუთვნის.

სკვერი ქუთაისის მერმა შოთა მურდულიამ, საკრებულოს თავმჯდომარემ დავით დვალმა , ადგილობრივი თვითმმართველობის წარმომადგენლებმა , USAID-ის , ვინროკ ინტერნეიშენალის და არასამთავრობო ორგანიზაცია ენერჯო ეფექტურობის ცენტრის წარმომადგენლებმა დაათვალიერეს.

ე.წ. „მზის გვირილა“-სთან თავმოყრილია USB დასამუხტი წერტილები , მოსასვენებელი სკამები განათებით, გამწვანება და მზის ენერჯიაზე მომუშავე სანათი წერტილები. აღნიშნული ტექნოლოგიური ინსტალაცია, დღისით მასზე განთავსებული მზის ბატარეების მეშვეობით, იღებს საჭირო ენერჯიას და გამოიყენება როგორც ავტონომიური დასამუხტი საშუალება, რაც უფრო მეტად ეკოლოგიურად სუფთა გარემოში ცხოვრების წესის დანერგვას შეუწყობს ხელს.

ქუთაისის ტურიზმის საინფორმაციო ცენტრის გახსნის შემდეგ სექტემბერში აღნიშნულ სკვერში ხელმსაწვდომი იქნება WI-FI, ელ. ბიბლიოთეკა და სხვადასხვა ინფორმაციის მიღება QR კოდების მეშვეობით.

Source: kutaisipost.ge
Date: June 30, 2016
Title: Solar Daisy is Installed in Kutaisi

Energy efficient Solar Daisy is installed on the territory of the former information center. Through fixed solar panels the solar energy is converted into electric power.

The Solar Daisy is capable of charging 60 cell phones and 30 cell phones simultaneously per day.

The Solar Daisy project is implemented by USAID-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program, implemented by Winrock International and Kutaisi City Hall.

“The design of a daisy was selected because this flower is symbolic for Kutaisi. There are 24 solar panels fixed on the flower petals that transform solar energy into electric power”- said EC-LEDS Awareness and Outreach Manager.

The presentation of the Solar Daisy was attended by Kutaisi Mayor. According to him, the Solar Daisy will be convenient for Kutaisi inhabitants and tourists as well.

“Soon a tourist information center will be opened and now we have a Solar Tree as well. I suppose, this idea will be successful. Similar projects can be implemented in other parks. This is a creative idea Kutaisi City was in need of.” – said Kutaisi Mayor.

According to Mayor, shortly after opening of Kutaisi Touristic Information Center, a free WI-FI and electrical library will be available in the park.

ახალი ამბები

ქუთაისში მზის ხე დამონტაჟდა



13:32 / 30.06.2016

"მზის გვირილას" გამოყენებით შესაძლებელი იქნება დღის განმავლობაში 60, ხოლო ერთდროულად 30 მობილური დაიმუხტოს.

ქუთაისში, ტურიზმის საინფორმაციო ცენტრის ყოფილი შენობის ადგილას ენერგოეფექტური გვირილის ხე

დამონტაჟდა. მასზე დამაგრებული პანელების დახმარებით მზის ენერჯია ელექტროენერჯიად გარდაიქმნება.

"მზის გვირილას" გამოყენებით შესაძლებელი იქნება დღის განმავლობაში 60, ხოლო ერთდროულად 30 მობილური დაიმუხტოს.

ენერგოეფექტური გვირილის ხის პროექტი აშშ-ის საერთაშორისო განვითარების

Source: TV Iberia
Date: July 1, 2016
Title: Solar Daisy in Kutaisi

For the first time in Georgia a Solar Daisy is installed in Kutaisi. According to the City Hall decision, a public park was arranged in the central-historical district of the city equipped with environmentally clean, modern and efficient technologies. The Solar Daisy was installed in this park. The installation converts solar energy into electric power through solar panels. The panels are fixed on the petals of the flower. The Solar Daisy promotes the idea of clean and healthy environment”.

“You know that soon a touristic information center will be opened here and it is very important that such technological system is arranged in this park. If this idea succeeds, and I hope it will, we can implement similar project in other parks as well. You have also attended the presentation at Torpedo Football Base today, where the expensive solar photovoltaic system was installed” - said Kutaisi Mayor.

Source: Rioni TV
Date: June 30, 2016
Title: Solar Daisy in Kutaisi

A Solar Daisy is installed in Kutaisi in the framework of Community-Based Social Marketing pilot campaign. 30 points of cell phone chargers are accumulated on the construction, which is equipped with solar elements and modern technologies. In the nearest future, it will be possible to use electric library in the park on Rustaveli Avenue after the opening of touristic information center. Kutaisi City Hall agreed to implement this project following the initiative of Economic Development department. Energy efficient project was implemented within Community-Based Social Marketing pilot campaign implemented by Winrock International Georgia, with the support of USAID.

“The idea of the project was to install a pilot daisy-shaped tree - a construction that is equipped with modern technologies, solar energy transforming devices with charging points in order to charge cell phones and other devices. It will be useful for Kutaisi citizens and tourists as well.

“Kutaisi Municipality has joined Covenant of Mayors Initiative (EU) in 2011 that aims at reduction of GHG emissions by 20% for 2020 year. For this aim, it is essential to implement energy efficient and renewable energy projects, along with other projects, as well. This project is a pilot and we will monitor the outcome for the city”-said EC-LEDS Clean Energy Program Chief of Party.

Presentation of a demonstration project took place at Torpedo Football Base. The Project implementers observed works completed under the project. After the presentation, a football match was held.

“A demonstration project was presented at Torpedo Football Base in the framework of Energy Days. Project donors and implementers observed the energy efficient construction of 200L solar water heating system installed on the territory of Football Base.”

“Energy efficient water heating system was installed at Torpedo Football Base, which will significantly reduce consumption of energy on the territory of the base. We plan to implement similar projects in municipal buildings with the support of donors”-said the Head of Economic Development department at Kutaisi City Hall.

“As you already know, BP-Georgia works almost 20 years in Georgia and manages three different pipelines, but more than 13 years our company implements various social and economic projects as well. This project helps Kutaisi and other big cities to join EU initiative-Covenant of Mayors that aims to reduce GHG emissions in the atmosphere by 20% by 2020”- BP-Georgia General Manager.

Project was implemented by Energy Efficiency Center – Georgia with the financial support of BP – Georgia and its oil and gas partners, Kutaisi City Hall, USAID and Winrock International.

“As this Base serves not only professional teams, but amateur and schoolchildren teams as well, all of them will benefit from the project results. Total sum of the project is USD150 000 but each component had the separate cost accordingly”- Director of Energy Efficiency Center Georgia.

“After the presentation, Torpedo football players played a match was conducted between two boys’ teams, future professional footballers were awarded with certificates”.

Source: newpress.ge
Date: June 30, 2016
Title: Photovoltaic Lighting System is Installed on Torpedo Football Base

Various renewable energy and energy efficient systems were installed on Torpedo Football Base. A photovoltaic lighting system was installed and connected to network on Torpedo Football Base. System consists of sixteen 30-watt and ten 60-watt LED lights that were replaced on all lighting polls around the stadium. The peak capacity of the solar electric system is 1560 watt. A 2000-liter capacity solar water heating system was also installed and connected to the existing hot water system working on natural gas.

In the main building, 350 incandescent light bulbs were replaced by compact fluorescent lamps. After the presentation, Torpedo football players played a match. The players were awarded certificates, T-shirts and caps. Project was implemented by Energy Efficiency Center Georgia, financial support of BP–Georgia and its oil and gas partners, Kutaisi City Hall, USAID and Winrock International Georgia.



თავარი პოლიტიკა ეკონომიკა საზოგადოება საგარეო ურთიერთობები თვითმმართველობა გადაწყვეტილებები [Video] მეტი

უფასო ინტერნეტი და ელექტროენერგია—ქუთაისში ენერგოეფექტური სკვერი გაიხსნა

სიახლეები - 2016-06-30 11:06:00 18487



ქუთაისში ენერგოეფექტური სკვერი გაიხსნა. სკვერი რუსთაველის გამზირზე მდებარეობს, სადაც ტურიზმის საინფორმაციო ცენტრი ფუნქციონირებდა. ადგილობრივი ხელისუფლების გადაწყვეტილებითა და დონორი ორგანიზაციების მხარდაჭერით ადგილზე „მზის გვირილა“ დამონტაჟდა.
ქუთაისის მერიის ეკონომიკური სამსახურის უფროსის, პაატა კლდიაშვილის განცხადებით, ქუთაისის მუნიციპალიტეტის მერიამ ეკონომიკური განვითარებისა და ადგილობრივი თვითმმართველობის ქონების მართვის სამსახურის ეკონომიკური განვითარების განყოფილების ინიცირებით მიიღო გადაწყვეტილება ქალაქის ცენტრალურ-ისტორიულ უბანში ენერგოეფექტური ტექნოლოგიებით აღჭურვილი ეკოლოგიურად სუფთა სკვერის მოწყობის შესახებ. აღნიშნულ სკვერში პროექტით გათვალისწინებულია მზის ელემენტებით და თანამედროვე ტექნოლოგიებით აღჭურვილი კონსტრუქციის, ე.წ. „მზის გვირილის“ დამონტაჟება, სადაც თავმოყრილი იქნება USB დასამუხტი წერტილები (მობილური ტელეფონების, ნოუთბუქებისა და სხვა ელექტრო ტექნიკისათვის), მოსასვენებელი სკამები განათებით, გამწვანება (სკვერი შესაძლებელია შემოსაზღვრული იქნეს ერთი მეტრის სიმაღლის ბუჩქოვანი მცენარეებით, ასევე დამუშავდეს და შეივსოს სკვერში არსებული მცენარეული საფარი) და მზის ენერგიაზე მომუშავე სანათი წერტილები. რომელიც დაგეგმილია

„დაბალემისიებიანი განვითარების სტრატეგიის შესაძლებლობათა გაძლიერება (EC-LEDS) სუფთა ენერჯის პროგრამის“ მიერ. ადგილზე დამონტაჟებული 30 ტიპის მობილურისა და სმარტფონის დამტენები, ასევე უახლოეს პერიოდში შესაძლებელი იქნება ელექტრონული ბიბლიოთეკით სარგებლობა.

Source: TV IMEDI
Date: July 1, 2016
Title: Energy Efficient Public Park in Kutaisi

Kutaisi City Hall opened the Energy Efficient Square. A Solar Daisy is the first solar tree in Georgia, which was installed in Kutaisi. The so-called “Solar Daisy” is equipped with USB charging points. In addition, the park is equipped with solar lighting. The mentioned technological installation will contribute to the introduction of clean and environment-friendly lifestyle among the citizens of Kutaisi.



Source: www.energynews.ge
Date: July 2, 2016
Title: The Solar Energy Lighting System Is Installed in Kutaisi Public Park

“Solar Tree” is installed in the public park in the Kutaisi city center. There is a solar lighting system installed in the same park. “Solar Daisy” users will be able to charge thirty cell phones simultaneously and fifty devices during a day. The device is equipped with USB charging points for cell phones and other devices. The initiative is implemented as part of EC-LEDS Community-Based Social Marketing pilot campaign in partnership with USAID and Winrock International.

A special event was held in the framework of Sustainable Energy Days at Kutaisi Torpedo football base. Energy efficient lighting system and solar panels were installed on the roof of the building, which will supply hot water. The solar system will contribute to a significant reduction of energy costs.

“As you already know, BP- Georgia works in Georgia for almost 20 years and has already invested around 3 billion US dollars so far. In 2011 Kutaisi has joined the EU’s initiative that aims at reduction of GHG emissions by 20% by 2020. We support this project and with other companies assist “Kutaisi Torpedo” in mastering new technologies. All this is an evident presentation of energy efficiency idea. We hope that other companies or ordinary people come to see these technologies and share experience that will contribute to the creation of a better environment”- said the General Manager of BP-Georgia General Manager.

მთავარი გვერდი / ალტერნატიული ენერჯია / ქუთაისში არსებულ სკვერში მზის ენერჯიაზე მომუშავე განათება დამონტაჟდა



ქუთაისში არსებულ სკვერში მზის ენერჯიაზე მომუშავე განათება დამონტაჟდა

02/07/2016 1,074 Views

ქუთაისის ცენტრში მდებარე საჯარო პარკში „მზის ხე“ დამონტაჟდა

სკვერში ასევე მზის ენერჯიაზე მომუშავე განათებაც მოეწყო. “მზის გვირილას” მომხმარებლებს საშუალება ექნებათ დამუხტონ ერთდროულად 30, ხოლო დღე-ღამეში 50 მობილური ტელეფონი. იგი აღჭურვილია USB დამტენებით მობილურების, პლანშეტებისა და სხვა მონაცემების დასატენად.

Source: www.bfm.ge
Date: July 2, 2016
Title: The Solar Energy Lighting System Is Installed in Kutaisi Public Park

“Solar Tree” is installed in the public park in the Kutaisi city center. There is a solar lighting system installed in the same park. “Solar Daisy” users will be able to charge thirty cell phones simultaneously and fifty devices during a day. The device is equipped with USB charging points for cell phones and other devices. The initiative is implemented as part of EC-LEDS Community-Based Social Marketing pilot campaign in partnership with USAID and Winrock International.

A special event was held in the framework of Sustainable Energy Days at Kutaisi Torpedo football base. Energy efficient lighting system and solar panels were installed on the roof of the building, which will supply hot water. The solar system will contribute to a significant reduction of energy costs.

“As you already know, BP- Georgia works in Georgia for almost 20 years and has already invested around 3 billion US dollars so far. In 2011 Kutaisi has joined the EU’s initiative that aims at reduction of GHG emissions by 20% by 2020. We support this project and with other companies assist “Kutaisi Torpedo” in mastering new technologies. All this is an evident presentation of energy efficiency idea. We hope that other companies or ordinary people come to see these technologies and share experience that will contribute to the creation of a better environment”- said Kris Schlueter, General Manager of BP-Georgia General Manager.



ქუთაისში არსებულ სკვერში მზის ენერჯიაზე მომუშავე განათება დამონტაჟდა

July 2, 2016 206 ნახვა

ქუთაისის ცენტრში მდებარე საჯარო პარკში „მზის ხე“ დამონტაჟდა

Source: www.ekofact.com
Date: July 7, 2016
Title: Solar Panels Fixed on “Solar Daisy” Leaves

Another presentation was held at the Torpedo football base. The project implementers presented a photovoltaic lighting system connected to network, a 2000-liter capacity solar water heating system connected to the existing hot water system working on natural gas and replaced energy saving light bulbs. The project was implemented by Energy Efficiency Center Georgia, BP – Georgia and its oil and gas partners, Kutaisi City Hall and USAID/Winrock International Georgia.

Presentation was attended by officials from Kutaisi City Hall, USAID, Winrock International Georgia, BP-Georgia and Energy Efficient Center-Georgia.

Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program is implemented by Winrock International Georgia with the support of USAID. Through this project, USAID supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy activities, and enable more responsible management and development of Georgia’s natural endowments.

The screenshot shows the website 'ekofact.com' with a news article in Georgian. The article title is 'შხის გვირილის ფურცლებზე დამაგრებული შხის პანელები' (Solar panels fixed on 'Solar Daisy' leaves). The article text describes the installation of solar panels on a 'Solar Daisy' structure in Kutaisi, Georgia, supported by USAID and Winrock International Georgia. The website header includes the logo 'ekofact.com' and navigation links in Georgian. The article text is as follows:

ქ. ქუთაისის რუსთაველის გამზირზე მიწისქვეშა გადასასვლელთან არსებულ სვეტში ჩატარდა გვირილის ფორმის "შხის ხის" პრეზენტაცია. ლონისძიებაზე წარმოდგენილი იყო გვირილის ფორმის "შხის ხე", როგორც სუფთა დაუსაფრთხო ენერჯის წყარო ჯანსაღი გარემოსათვის. შხის გვირილის ფურცლებზე დამაგრებული შხის პანელები გარდაქმნის შხის ენერჯიას ელექტრო ენერჯად და საშუალებას იძლევა მასზე დამონტაჟებული დასამუხტი საშუალებებით დღე-ღამის განმავლობაში 50-60 და ერთდროულად 30 ელექტრო მოწყობილობის დამუხტვა. შხის გვირილის შექმნა შესაძლებელი გახდა აშშ-ის საერთაშორისო განვითარების სააგენტოს (USAID) მხარდაჭერით განხორციელებული პროექტის „დაბალ ემისიებიანი განვითარების სტრატეგიის შესაძლებლობათა გამოვლენა (EC-LEDS)“ სუფთა ენერჯის პროგრამის "ფარგლებში დაგეგმილი სათემო სოციალური მარკეტინგის საპილოტე კამპანიის ფარგლებში.

Source: www.georgiajournal.ge
Date: July 8, 2016
Title: First Energy Efficient ‘Solar Chamomile’ Launched in Kutaisi

In the historic center of the city of Kutaisi, Imereti region, the first energy efficient public garden was opened with a large metal structure, designed as three large flowers, which allows you to charge your computer, mobile phone and other electronic devices through USB. It was created according to modern technologies and equipped with solar panels.

The ‘Solar Chamomile’ collects the sun’s energy during daylight hours, which charges internal batteries that in turn charge users’ electrical devices.

Kutaisi City Hall announced that the first ‘solar chamomile’ installed in Georgia aims to encourage the use of green energy and an energy efficient lifestyle in Kutaisi and eventually throughout the country.

From September 2016, the same Kutaisi central garden will be fitted with a Wi-Fi hotspot and an electronic library where users can download digital books using QR codes.

The project was co-financed by Winrock International, United States Agency for International Development (USAID), Kutaisi City Hall and the Energy Efficiency Center of Georgia.

SOCIETY

First Energy Efficient ‘Solar Chamomile’ Launched in Kutaisi



08 July, 2016



In the historic center of the city of Kutaisi, Imereti region, the first energy efficient public garden was opened with a large metal structure, designed as three large flowers, which allows you to charge your computer, mobile phone and other electronic devices through USB. It was created according to modern technologies and equipped with solar panels.

Source: Palitra News
Date: July 21, 2016
Title: First Energy Efficient Square in Georgia

The first “Solar Daisy” is installed in Georgia, in Kutaisi. The idea of the Solar Tree was initiated by Economic Development Service at Kutaisi City Hall. Kutaisi Mayor, Chairman of City, representatives of the local self-governance, USAID, Winrock International and NGO Energy Efficiency Center – Georgia observed the renovated Park. The so-called “Solar Daisy” is equipped with USB charging points. The park is equipped with benches and solar lighting. The given technological installation works on solar energy and is used as an autonomous charging point promoting the idea of living in a cleaner environment. After the opening of Kutaisi Touristic Information Center in the park, it will be equipped with free WI-FI and electronic library.



Source: www.inews.ge
Date: July 21, 2016
Title: Fist Energy Efficient Square in Georgia

A Solar Daisy was installed in the energy efficient public park in the historical district of Kutaisi. The installation is equipped with USB charging points for cell phones and other devices. The technological installation receives solar energy via solar batteries and is used as an autonomous charging point. According to Kutaisi District Administration, the novelty gives an opportunity to introduce more clean and environment-friendly living conditions. After opening of the Kutaisi Touristic Information Center, the free Wi-Fi and E-library will be available in the park. The opening ceremony was attended by Kutaisi Mayor, Sakrebulo Chairman and the representatives of local self-government and NGOs.



საქართველოში პირველი ენერგოეფექტური სკვერი გაიხსნა

✓ მოწონს 1 განიარება

ქუთაისის ისტორიულ რაიონში პირველი ენერგოეფექტური სკვერი გაიხსნა, სადაც დამონტაჟებულია „მზის გვირილის“ კონსტრუქცია, რომელიც კომპიუტერული ტექნიკისა და მობილური ტელეფონების დასამუხტვის საშუალებას იძლევა. „მზის გვირილა“ თანამედროვე ტექნოლოგიებით და მზის ელემენტებით აღჭურვილი კონსტრუქციაა, მასთან თავმოყრილია USB დასამუხტი წერტილები. აღნიშნული ტექნოლოგიური ინსტალაცია, დღისით მზის ბატარეების მეშვეობით იღებს საჭირო ენერგიას და გამოიყენება როგორც ავტონომიური დასამუხტი საშუალება. „ეს შესაძლებლობას იძლევა, დაინერგოს ეკოლოგიურად უფრო სუფთა გარემოში ცხოვრების წესები“, —

Source: TV Rioni
Date: July 21, 2016
Title: Energy Efficiency

A solar photovoltaic station was installed at the Kutaisi Torpedo Sport Base. This device transforms solar energy into electrical energy. The first station, which is connected to the local network, is located in Kutaisi. After the system is put in operation, the lighting on the walking lanes at Torpedo will be supplied by solar energy. This is profitable for the base as from the environmental point of view, so with regards to cost saving. The project is implemented by the financial support of Union "Energy Efficiency Center Georgia", BP – Georgia and its oil and gas partners, within the project "Renewable Energy and Energy Efficiency Project" for Georgian municipalities".

"A solar photovoltaic station is installed at Torpedo Sport Base. This station transforms solar energy into electrical energy. The system is connected to the network and the first system in Georgia. Until now, such systems we used to have autonomous systems, those using accumulators, which we call Achilles's heel. Now, this system doesn't require exploitation costs, because it is connected to the network and can work for 30-50 years. Let me describe the process: system generates electrical energy from solar energy and supplies the inner network. If transformed energy is not sufficient, the system will take additional energy from the central power station. This system will ensure the lighting of the inner yard as you see we have installed polls with energy efficient luminaries. This system generates enough energy for lighting purposes during the night"- said the Director of Ltd Solar House.

"This project is implemented for the first time in Georgia. We are glad that this project is implemented at Torpedo. Kutaisi City Hall was actively involved in the implementation of this pilot project. For us it is important that electricity consumption will be reduced by using this system. Currently, the lighting system installation works are in progress, and we plan to install a water heating system as well, that will result in significant cost-savings. In case if this experience is shared by other clubs and organizations throughout Georgia, we will face the large-scale energy saving, as well as saving of money that can be spent for other needs" – said the Executive Director of the Torpedo Sport Base.

Solar water heating system was also installed at Torpedo Sport Base, which provides the heating of 2000L water in a sunny day. The system will supply the shower baths and kitchen with hot water and, at the same time, save the costs of natural gas.

The capacity of the system is 2000L water per day. We installed sixteen solar collectors on the roof of the building, and a 2000L water tank in the boiler house" –Director of the Ltd Sun House.

The presentation of the Renewable Energy and Energy Efficiency Demonstration Project took place in Kutaisi during the Sustainable Energy Days. Project donors and implementers observed the woks at Torpedo Sport Base.

"The energy efficient water heating system will significantly reduce consumption of energy on the territory of the base. We also plan to implement similar projects in municipal buildings with the support of donors"- said the Head of Economic Development Department at Kutaisi City Hall.

"As you already know, BP-Georgia has been working in Georgia for 20 years so far. We manage three different pipelines but more over than 13 years our company implements various social and economic projects. These projects help Kutaisi and other big cities to join EU initiative - Covenant of Mayors that aims at reduction of GHG emissions by 20% by 2020"- said the General Manager of BP-Georgia.

The project was implemented by financial support of Union “Energy Efficiency Center Georgia”, BP – Georgia and its oil and gas partners, Kutaisi City Hall, United States Agency for International Development (USAID) and Winrock International Georgia.

“After implementation of this project, the annual cost-saving will be around 10,000 laris and 20,000 tons of GHG emissions in atmosphere. In addition, as this training base serves amateur and school teams as well, we use project goals for popularization of clean energy technologies”- said the Director of Energy Efficiency Center Georgia.

“We allocated grant in the amount of 42,000 US dollars to purchase solar photovoltaic panels for water heating system. Apart from involvement in this particular project, our project assisted Kutaisi City Hall in the elaboration of Sustainable Energy Action Plan, which identifies the priorities for energy efficient measures. With this pilot, we hope to demonstrate to donors and Kutaisi population the benefits of renewable energy. Besides the reduction of GHG emission, there is an energy cost-saving that enables the municipality to use saved money for financing other similar projects”- said the EC-LEDS Deputy Chief of Party.

A Solar Daisy is installed in Kutaisi in the framework of Community-Based Social Marketing pilot campaign. 30 points of cell phone chargers are accumulated on the construction, which is equipped with solar elements and modern technologies. In the nearest future, it will be possible to use electric library in the park on Rustaveli Avenue after the opening of touristic information center. Kutaisi City Hall agreed to implement this project following the initiative of Economic Development department. Energy efficient project was implemented within Community-Based Social Marketing pilot campaign implemented by Winrock International Georgia, with the support of USAID.

“A very interesting project presentation is taking place in Kutaisi that is implemented within one of the projects supported by USAID and promotes energy efficient technologies using popularization. An Energy Efficient Square is opened in Kutaisi. We have been working on this project for several months so far. The idea of the project was to install a pilot daisy-shaped tree - a construction that is equipped with modern technologies, solar energy transforming devices with charging points in order to charge cell phones and other devices. It will be useful for Kutaisi citizens and tourists as well. We will monitor the work of this new technology. I want to thank particularly USAID; with the financial support from this organization the project was implemented. I also want to thank Winrock Georgia and other donor organizations involved in this initiative” - said Kutaisi Mayor.

“We participated in the installation works of the so-called Solar Tree in this nice Square in cooperation with Kutaisi City Hall. The aim of this installation is to popularize the idea of renewable energy among the population of Kutaisi. Kutaisi Municipality has joined Covenant of Mayors Initiative (EU) in 2011 that aims at reduction of GHG emissions by 20% for 2020 year. For this aim, it is essential to implement energy efficient and renewable energy projects, along with other projects, as well. This project is a pilot and we will monitor the outcome for the city”-said EC-LEDS Clean Energy Program Chief of Party.

The mentioned project serves to the introduction of energy efficient technologies, particularly in Kutaisi and in Georgia as well. It contributes to the creation of more environmentally clean conditions in the country.

Sustainable Energy Days in Georgia is celebrated from 2010. During the event different awareness raising activities take place in various regions of Georgia.



Source: energynews.ge
Date: **October 4, 2016**
Title: **Energy Efficient Project Implemented in Heidelberg Cement Georgia**

USAID-supported the implementation of the Heidelberg Cement Georgia Cement Mill Research and Renovation Project in Rustavi Cement Plant. Total project cost is USD 300,000. The maintenance works started in the beginning of year 2016 and completed in September.

The project introduced modern technologies and implemented reconstruction and modernization works in the Plant.

The energy efficient solutions implemented in the Plant will contribute to the improved infrastructure and environmental conditions, and make the plant a safer and more energy efficient working space.

Source: commersant.ge
Date: **October 4, 2016**
Title: **Energy Efficient Project Was Implemented with the Support of US Government in Heidelberg Cement Georgia**

Rustavi – On Friday, September 30, 2016 at 13:00 the USAID-supported EC-LEDS Clean Energy Program presented the Heidelberg Cement Georgia Cement Mill Research and Renovation Project. The event took place in Heidelberg Cement Georgia Rustavi Plant.

EC-LEDS assisted Rustavi plant with research and analysis of three cement mills, developing recommendations for upgrading cement mills with energy efficient components and procurement of high efficiency engine frequency inverters for installation and supervision of installation works in accordance with recommendations provided.

The project demonstrated the energy efficient solutions that contribute to the improved environmental conditions in the plant, which will make the biggest job supplier of Rustavi - Heidelberg Cement Georgia - a safer and more energy efficient working space. The project was implemented by Georgian Energy Resources Effectively Using Association (GEREUA) in collaboration with Heidelberg Cement Georgia with the support of EC-LEDS Clean Energy Program.

Introduction of renewable energy solutions is one of the ways the U.S. Government supports Georgia's efforts to increase climate change mitigation through energy efficiency and clean energy activities, and enable more responsible management and development of Georgia's natural endowments.

Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program is supported by USAID and implemented by Winrock International Georgia.

Annex 4: Youth Energy Efficiency Events

I. Executive Summary

The EC-LEDS Youth Energy Efficiency Events were held in Misaktsieli village on December 15th, 2015, Mtskheta on March 23rd, and Rustavi on April 20th, 2016. Participants of the events were students in the 9th-12th grades selected from the “Momavlis Taoba” (Future Generation) Program. The purpose of the events was to involve the youth in energy efficiency, contributing to climate change mitigation.

This report presents a description, the list of participants, and an overview of materials used for the event.

PARTICIPANTS

The EC-LEDS Youth Energy Efficiency Events were attended by a total of 38 youths in the 9th to 12th grades and five teachers from the villages of Misaktsieli, Dzveli Kanda, Akhaldaba, Tsilkani, Ksovrissi, Jinvali, Tchartali and Khevsurtsopeli (21 females, 22 males); 41 youth in the 9th to 12th grades from the villages of Sakramuli, Nichbisi and Sioni (24 females, 17 males); 34 youth in the 9th to 12th grades from Rustavi and Gardabani schools (13 females, 21 males).

Full lists of participants are provided in **Attachment A**.

CONTENT

The EC-LEDS Youth Energy Efficiency Events were 2.5 hours long, of which the first two hours were dedicated to “How to Save Energy.” The seminar covered the following topics:

- **What is Energy Efficiency:** A brief introduction to energy efficiency and explanation of energy terms.
- **Ways to Save Energy:** Various ways to save energy and the energy audit.
- **Information Campaigns:** A brief description of advertising and information campaigns about energy efficiency.
- **The Importance of Energy Efficiency:** The importance of energy efficiency with regard to the rational use of energy, energy security of the state, and the importance of energy efficiency for Georgia.
- **Energy Efficiency in the Residential Sector:** How to save energy at home.
- **Energy Efficient Technologies:** An introduction to technologies and appliances.
- **Renewable Energies:** Discussion of renewable energy sources with examples of technologies and how to use them.
- **Energy Efficient Projects:** Some energy efficient projects supported by donor organizations.

In the second part of the event the students participated in contests and were given simple EE tests covering the topics of the session. The top three winners were awarded with medals. All students and teachers were awarded with participation certificates. The contest questions are provided in **Annex B**.

PRESENTER

The EC-LEDS Youth Energy Efficiency Events were conducted by the Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor. The seminar topics and presentation were developed specifically for EC-LEDS Youth Energy Efficiency Event by presenter in cooperation with EC-LEDS staff.

VENUE, Timing and Logistics

The EC-LEDS Youth Energy Efficiency Events were held as follows:

- Misaktsieli Public School, Misaktsieli village, Mtskheta Municipality.
- Mtskheta Municipality Gangeoba (Administrative Body of the Mtskheta Municipality).
- Rustavi Civic Engagement Center (22, Kostava street, Rustavi).

The materials were in Georgian and the events were free for all participants.

The events were organized by EC-LEDS in collaboration with of PH International within the framework of the USAID-supported “Momavlis Taoba” (Future Generation) Program.

CONCLUSION

Youth actively participated, with questions and lively discussions. All participants noted the importance of organizing similar events, as such meetings contributed to their awareness of the subjects. They were satisfied with all aspects of the training and confirmed that the presentations met their expectations. After the events, students made commitments to conduct simple home energy audits and spread the word about energy saving among their families and schools.

Attachment A. Contest Questionnaire



“Energy Efficiency Is A Smart Choice”

Name, Surname _____
City _____
School# _____

Please select the correct answer:

1. Location of a refrigerator near heating devices affects the efficiency of its operation:

- a. Positively _____
- b. Negatively _____

2. A TV set in stand-by mode consumes electricity:

- a. Yes _____
- b. No _____

3. What is the impact of hot dishes placed in the refrigerator?

- a. Reduces energy consumption of the appliance _____
- b. Increases energy consumption of the appliance _____

4. Is it more efficient to read a book by the window to use daylight efficiently?

- a. Yes _____
- b. No _____

5. When using water heater tank (e.g. Thermex) should the regulator be set at the maximum position?

- a. Yes _____
- b. No _____

6. In order to maintain warmth in the room generated from fire place or wood stove, is there a need to lower or close the cover in case of their extinguishment?

- a. Yes _____
- b. No _____

7. 80% of consumed energy in a dwelling is consumed by:

- a. Heating _____
- b. Cooking _____
- c. Water heating _____

8. Is it possible to detect a draught's direction with a candle?

- a. Yes _____
- b. No _____

9. Is it necessary to ensure air tightness of doors and windows to reduce energy consumption?

- a. Yes _____
- b. No _____

10. Can packaging tape ensure energy saving if it is fixed on both sides of a cracked window glass?

- a. Yes _____
- b. No _____

11. Is it more efficient to open a window frequently and for a short time to air a storage area?

- a. Yes _____

b. No _____

12. When do we spend more energy: while taking a bath or a shower?

a. Bath _____

b. Shower _____

13. When cooking, can improperly selected saucepans be a cause for energy loss?

a. Yes _____

b. No _____

14. When cooking, should a pan fit the size of the burners?

a. Yes _____

b. No _____

15. A rounded bottom or wrong size of a pan prolongs cooking time by:

a. 10% _____

b. 40% _____

c. 20% _____

16. Can a label fixed on home appliances help us detect the energy efficiency of an appliance?

a. Yes _____

b. No _____

17. Can we save energy if we turn the TV set off of stand-by mode?

a. No _____

b. Yes _____

18. In order to save energy one should start ironing:

a. From the lowest temperature _____

b. From the highest temperature _____

19. Is it possible to get the same light from 25-watt bulb as from 100-watt bulb?

a. Yes _____

b. No _____

20. By using modern energy efficient bulbs, we can reduce energy consumption by:

a. 15% _____

b. 60% _____

c. 100% _____

Correct Answers

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| b | a | b | a | b | a | a | a | a | a | a | a | a | a | b | a | a | a | a | b |

Attachment B. Awards

Certificate



Medals





Annex 5: PWD Youth Energy Efficiency Event

Executive Summary

The EC-LEDS Youth Energy Efficiency Event was held in Tbilisi Public School #202 (Boarding House for Blind Children) on September 22nd, 2016. Participants of the events were students in the 7th-12th grades. The purpose of the event was to involve youth with disabilities in energy efficiency, contributing to climate change mitigation.

This report presents a description, the list of participants, and an overview of materials used for the event.

Youth EE Event PARTICIPANTS

The EC-LEDS Youth Energy Efficiency Event was attended by a total of 18 students in the 7th to 12th grades from Tbilisi Public School #202 (Boarding House for Blind Children, 10 females, 8 males).

Full lists of participants are provided in **Attachment A**.

CONTENT

The EC-LEDS Youth Energy Efficiency Event was 1.5 hours long dedicated to seminar “How to Save Energy.” The seminar covered the following topics:

- **What is Energy Efficiency:** A brief introduction to energy efficiency and explanation of energy terms.
- **Ways to Save Energy:** Various ways to save energy and the energy audit.
- **Information Campaigns:** A brief description of advertising and information campaigns about energy efficiency.
- **The Importance of Energy Efficiency:** The importance of energy efficiency with regard to the rational use of energy, energy security of the state, and the importance of energy efficiency for Georgia.
- **Energy Efficiency in the Residential Sector:** How to save energy at home.
- **Energy Efficient Technologies:** An introduction to technologies and appliances.
- **Renewable Energies:** Discussion of renewable energy sources with examples of technologies and how to use them.
- **Energy Efficient Projects:** Some energy efficient projects supported by donor organizations.

At the end of the seminar all students were awarded with participation certificates, promotional flyers with Braille print, EC-LEDS branded T-shirts, caps and key chains. Certificates and promotional items are provided in **Annex B**.

PRESENTER

The EC-LEDS Youth energy efficiency event was conducted by the Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor Gia Arabidze. The seminar topics were developed specifically for this session for people with disabilities, by Professor Arabidze and the EC-LEDS staff.

VENUE, Timing and Logistics

The EC-LEDS Youth Energy Efficiency Event was held in Tbilisi Public School #202 (Boarding House for Blind Children) on September 22nd, 2016 (6, Gutani street, Tbilisi).

The promotional flyers were in Georgian printed with Braille print and the event was free for all participants.

The event was organized by EC-LEDS in collaboration with administration of Tbilisi Public School #202 (Boarding House for Blind Children).

CONCLUSION

Youth actively participated, with questions and lively discussions. All participants noted the importance of organizing similar events, as such meetings contribute to their awareness of current issues. They were satisfied with all aspects of the session and confirmed that the presentations met their expectations.

Attachment A: Awards

Certificate



Caps, T-shirts, Key Chains





Attachment B: Photos

