



Solar Daisy in Kutaisi

SOLAR TREE – CLEAN AND SAFE ALTERNATIVE FOR A HEALTHY ENVIRONMENT

The first Georgian Solar Tree, a Daisy-shape 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 accomplishment of goals prescribed in Sustainable Energy Action Plan. The second structure, an autonomous charging station, was created for Zugdidi City and installed in the Skate Park. 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.

EC-LEDS supported the Municipalities of Kutaisi and Zugdidi in application of Renewable Energy technologies as part of EC-LEDS Community-Based Social Marketing campaign (CBSM).

A Solar Tree is a four-meter installation, which converts solar energy into electric power through solar panels charging capacity of 30 cellphones simultaneously and 50-60 cell phones per 24 hours and serves as an autonomous charging point promoting the idea of living in a cleaner environment.

WARM ELDERLY – RENEWABLE ENERGY SOLUTIONS FOR GEORGIA'S ELDERLY PEOPLE

"The Warm Elderly project had a strong impact on our lives," says Murman Khachapurdze, a retired journalist who lives in the Tbilisi Elders Boarding House. "For almost 25 years, our building had inadequate heat and hot water. But things changed with USAID's Warm Elderly project. All of you are always welcome in our big family."

Through a USAID-supported grant, Murman and his fellow boarding house residents now have a new solar hot water heating system and other energy efficiency upgrades, which save money and help protect the environment for future generations. "Warm Elderly – Energy Efficiency Measures for Tbilisi Elders Boarding House" is a joint effort by Energy Efficiency Center Georgia (EEC), with 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 and USIAD-supported EC-LEDS Clean Energy Program.



Murman Khachapurdze with his wife

Low Emission Development for Sport - Kutaisi Torpedo vs CO₂ - a joint effort by Energy Efficiency Center Georgia (EEC), with co-financing from BP Exploration (Caspian Sea) Ltd. within its project "Renewable Energy & Energy Efficiency New Project", Kutaisi City Hall, and USIAD-supported EC-LEDS Clean Energy Program. EC-LEDS focused on procurement and installation of a solar water heating system and necessary peripheral equipment (piping and insulation, controller, etc.) capacity building and awareness raising activities connected with organization of Sustainable Energy Day in Kutaisi.

LED Street Lighting Demonstration Project in Zugdidi - As part of its Covenant of Mayors commitment, Zugdidi City Hall implemented a series of different infrastructure improvement activities, among them is rehabilitation of the outdoor lighting system and its complete modernization. EC-LEDS assisted Zugdidi City Hall by procuring 152 new LED lamps that the municipality installed on David Aghmashenebeli Avenue.

LED Street Lighting Demonstration Projects in Batumi - Due to the increasing tourist flow, Batumi City Hall connected two major streets, in particular, Gorgiladze and Shartava streets and extended Gorgiladze Street by 800 meters and implemented the relevant works to arrange the under- and on-the-ground infrastructure. EC-LEDS funded procurement of 130 LED outdoor lighting fixtures for Batumi Municipality, which installed the LED lights on the full length of Gorgiladze Street, including the new extension.

LED Street Lighting Demonstration Project in Batumi Public Park - Batumi City Hall arranged a 2-hectar public park on Lermontov Street and implemented the relevant infrastructural works. The overall objective of the project is to contribute to the fulfillment of commitments of Batumi City undertaken under Covenant of Mayors and implementation of measures defined in the SEAP. EC-LEDS assisted the City Hall with procurement of six 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.

Heidelberg Cement Georgia Cement Mills Research and Renovation Project - The project envisaged the research and renovation of Heidelberg Cement Mills in Rustavi plant, which was an outdated machinery and was a direct threat for health and well-being of those working at the factory and living in Rustavi and its surroundings. The EC-LEDS grant focused on research and analysis of Cement Mills 4, 5 and 6 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 was implemented by Georgian Energy Resources Effectively Using Association (GEREUA).

Utilization of Solar Energy Through Centralized Solar Farm in Bolnisi - EC-LEDS assisted Bolnisi Municipality in establishment of a solar energy farm that provides electrical energy for municipal needs: supply of electricity to Kindergarten, administration building of the Municipality and Bolnisi Culture house. A solar energy farm consists of 20X5 m metal framed structure covered with photovoltaic panels, and control and monitoring system.



Presentation of LED Street Lighting Demonstration Project in Batumi



Presentation of Heidelberg Cement Georgia Cement Mills Research and Renovation Project

Demonstration Project of Green Recreation Zone in the City of Telavi - The EC-LEDS assisted Telavi Municipality in design, planning, engineering and execution of the so-called Energy Central that operates on a number of renewable energy sources (integrated management of energy resources received as a result of transformation of various natural resources – solar, wind, geothermal etc.) and provides electricity and heating. The project was implemented by New Technology Center.

Hybrid Utilization of Biomass and Solar Energy for Heating of Kindergarten Building in Pshaveli Village – demonstration of generation of energy from renewable sources, provide energy to municipal consumers, and reduce energy consumption and GHG emissions. This project replaced the originally planned natural gas heating system in the Kindergarten in Pshaveli village with a heating system that operates on renewable energy and provides efficient use of energy in the kindergarten and its ancillary infrastructure. The EC-LEDS grant focused on financing of design, planning, engineering and installation of system of hybrid utilization of solar and biomass sourced energy for the kindergarten in Pshaveli. The project was implemented by New Technology Center.

SUSTAINABLE ENERGY ACTION PLAN (SEAP) PROCESS

Work on Telavi Sustainable Energy and Climate Action Plan (SECAP) and Mtskheta Sustainable Energy Action Plan (SEAP) documents was finalized.

Sustainable Energy and Climate Action Plan (SECAP) for Community Telavi Municipality was finalized. In addition to traditional SEAP sectors – buildings, transport, street lighting, greening and waste, the document addresses the energy efficiency measures in agricultural sector, as well. The document is accompanied by the communication and MRV plans.

The project proposals for the Bolnisi Municipality and Community Telavi Municipality were finalized.

EC-LEDS provided technical assistance for preparation of technical project proposals by Zugdidi, Akhaltsikhe, Kazbegi and Tianeti to be submitted to Japan International Cooperation Agency (JICA) open call for energy efficient project proposals.

Workshop on the application of the muni-EIPMP tool was conducted. During the workshop the final version of the analytical tool was presented, its new functions and technical possibilities were discussed theoretically (presentation and Question and Answer sessions) and tested through practical exercises. Final version of the tool was tested and distributed to the municipalities after the workshop.



Workshop on the application of the muni-EIPMP tool



Workshop on the application of the muni-EIPMP tool

LOW EMISSION DEVELOPMENT STRATEGY (LEDS) PROCESS

- Industry, Transport, Energy and Building sub-working group meetings were conducted in July. The meetings were attended by EC-LEDS, Remissia, USAID, the representatives of the Ministry of Energy, Ministry of Economy and Sustainable Development and Ministry of Environment and Natural Resource Protection, as well as invited experts. The topics discussed at sub-working group meetings included current situation within each sector, current EU policy for these sectors and Association Agreement of Georgia with EU, Low emission development strategy for each sector together with corresponding mitigation measures.

- Energy, Transport, Buildings and Industry chapters were prepared for LEDS document. The first section discusses current situation in the sector, the second presents the low emission development strategy of the sector and the third one lists mitigation measures for the sectors together with their descriptions and assessment of mitigation potential.

- EC-LEDS provided advisory and consultancy services to Ministry of Environment and Natural Resources Protection on the issues related to GHG emissions mitigation options and obligations to reduce emissions defined in the Intended National Determined Contribution (INDC) of Georgia, which, after signing the Paris Climate Agreement by GOG of Georgia, has been transformed into National Determined Contribution (NDC).

- EC-LEDS worked together with the Climate Change Office staff on the issues related to the assessment of the readiness gaps and barriers for the Georgia's NDC implementation process and provided consultancy on non-energy emissions related to Agricultural, Waste and Land use, Land-use Change and Forestry (LULUCF) sectors, as the integral parts of the LEDS document and the possible mitigation options in these fields.

- EC-LEDS participated in the workshop on "Recommendations for Georgia's Action Plan 2021-2030 for Climate Change and Reduction of GHG Emissions to the Target Level", which was supported by Konrad Adenauer Foundation and conducted by PMC Research, under the project "Policy Research for Sustainable Economic Development" and the LEDS advisor worked on the International program "Energy Efficiency and Innovation in Georgia – Brokerage Event" to support innovative activities in the field of energy efficiency, which was and funded by the European Union's FP7 Program.

EC-LEDS EMPOWERS CHILDREN WITH DISABILITIES THROUGH EDUCATION

Students from Tbilisi Public School #202 (Boarding House for Blind Children) took part in the Youth Energy Efficiency Event in September. EC-LEDS aims to empower PWDs through education on energy efficiency and provide them with equal opportunities to enjoy the benefits of energy efficient behavior. The ultimate goal is to involve PWDs in energy efficiency, contributing to climate change mitigation.

The event took place in Tbilisi Public School #202 (Boarding House for Blind Children). It was attended by students from 8th to 12th grades. During the event, students were given a presentation “How to save Energy”, which was conducted by Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor Gia Arabidze. The students were given participation certificates, promotional flyers with braille print, EC-LEDS branded caps, T-shirts and key chains.



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