Commercialization of Energy Efficiency Program in Armenia
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PILOT PROJECT BULLETIN

SOLAR WATER HEATING PROJECT IN BERLIN POLYCLINIC

Within the framework of the USAID funded Commercialization of Energy Efficiency Program Advanced Engineering Associates International has completed a solar water heating project in Berlin Polyclinics in Gyumri. The objective of the project was to demonstrate the benefits of renewable energy technologies that can potentially replace conventional energy sources such as electricity in water heating.

Solar collectors mounted on the roof

Berlin Polyclinic offers out patient treatment to infants and pregnant women and is located in one of the largest districts of Gyumri serving to approximately 14,000 people. It has been financially supported by Für Armenien Humanitarian Foundation which covered the operational expenses of the center over the last 15 years. The annual expenses of the polyclinic for water heating were equivalent to 5000 US dollars.

Installation of the support frame for solar collectors

Gyumri has about 280-300 sunny days per year on average, which can provide sufficient amount of solar energy. Installed on the roof, solar systems can replace gas or electricity used for water heating. Flat plate solar collectors with the total area of 50 m2 were mounted including a 2 ton storage tank and automatic control components. The system is also backed by gas heating option. Due to the construction of the roof, the installation of solar collectors required minimal structural changes and the project was completed in a relatively short period of time. At the same time the site has excellent solar exposure which promises significant energy and money savings.

Pilot Project Information:

- USAID Contractor: AEAI Armenia
- Date: August - December 2008
- Site: Berlin Polyclinics, Gyumri, Armenia

Realizing the cost effectiveness of the project Für Armenien Humanitarian Foundation committed to cost share 50% of the project on behalf of the polyclinic while the remaining part was to be provided by USAID. The application of the solar water heating technology presents a number of advantages to the user: it is based on environmentally sound reliable technologies and requires almost no cost exploitation. As a result, the demand for conventional energy sources – gas and electricity – will be reduced at a site providing energy and cost savings.

Other auxiliary equipment