Commercialization of Energy Efficiency Program in Armenia
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PILOT PROJECT BULLETIN

ENERGY EFFICIENCY PROJECT COMPLETED IN AREGAK DAY CARE CENTER

In September 2009, the USAID-funded Commercialization of Energy Efficiency Program, managed by Advanced Engineering Associates International, completed the project on installation of combined gas and solar water heating system in Aregak Day Care Center for Disabled Children. The cost of the project was equally shared between USAID and Armenian Caritas.

Solar water heating installed on the building roof

This Center located in Gyumri and was founded by Armenian Caritas to address the needs of children with multiple disabilities and to promote their social integration through learning and development of various working skills. In addition to being just an educational institution, Aregak also functions as an orphanage and hosts twenty six children who live there permanently. In total, about 160 members benefit from the services of Aregak Center.

The major issue for the Center was lack of affordable and quality heating which was addressed through the CEEP program. In addition there is a high demand for hot water, for which it has been decided to supplement the heating system with a solar component.

Pilot Project Information:

- USAID Contractor: AEAI Armenia
- Date: June - September 2009
- Site: Aregak Day Care Center, Gyumri, Armenia

Energy efficiency measures included the following:

- Fuel switching from electricity to natural gas by installing two double-circuit boilers (60 kW) of local manufacture for space heating and hot water supply.
- Renovation of internal heating system and installation of regulative valves
- Installation of 12 m^2 flat plate solar collectors and system control components.

Renovated/replaced cast iron radiators

Solar technologies are environmentally friendly and low cost in the long run period. Combination of solar collectors with the gas-fired heating system will allow reducing consumption of natural gas since it heats the water to be then circulated through the boilers. The total annual money savings earned from gas and solar water systems will exceed 2.4 mln Armenian drams. Annual energy savings at source were estimated to 378 MWh.

Euroterm boilers installed in Aregak Center