

## GEEP Project – New Pumps for Water Utility Company

### Saves energy and increases water delivery to consumers

The Water Utility supplies water to a big city in Georgia. The company is engaged in a major rehabilitation programme for the improvement of its water supply system, the network, pumping stations and reservoirs, in order to reduce operating costs and improve the quality and continuity of water supply.

At present, the utility operates more than 80 pumping stations, with an energy consumption of around 300 GWh/year. The processed water volume is around 1.6 Mm<sup>3</sup> daily, for the inhabitants. The high number of pumping stations is attributed to the hilly ground profile of the city, which increases the amount of energy used, also caused by the old inefficient pumps and the high percentage of water leakages.

It is planned to replace old pumps with new, energy efficient ones, together with automatic and control equipment. Today two pumps with a total capacity of 2320 m<sup>3</sup>/h and 915 kW do not provide water around the clock. By optimising the pump pressure, these pumps are replaced by three modern pumps with a total capacity of 1860 m<sup>3</sup>/h and power 575 kW, equipped with Variable Speed Drives, that will provide water for 24 hours a day. The saving corresponds to 3.2 GWh/year (207,000 USD/year).



#### The Company

<b>Main activities</b>	Water supply
<b>Region</b>	Georgia

#### Project Goal and Main Investments

<b>Project goals</b>	<ul style="list-style-type: none"> <li>Supply water for 24 hours</li> <li>Eliminate old inefficient pumps for which it is difficult to get spare parts</li> </ul>
<b>Main investments</b>	<ul style="list-style-type: none"> <li>Replacement of old inefficient water pumps</li> <li>Introduce new modern efficient water pumps, with Variable Speed Drives</li> <li>Optimize the pressure delivered by the pumps</li> </ul>
<b>Investment size</b>	Approximately USD 600,000

#### Expected Results

<b>Operational results</b>	<ul style="list-style-type: none"> <li>Decreased electrical consumption</li> <li>Decreased water losses due to lower water pressure</li> <li>Decreased Specific Energy Consumption (SEC) from 0.41 kWh/m<sup>3</sup> to 0.21 kWh/m<sup>3</sup></li> </ul>
<b>Investment profitability</b>	<ul style="list-style-type: none"> <li>Annual saving of around USD 210,000</li> <li>Payback period of 2.5 years</li> <li>Over 32% IRR on the investment</li> </ul>

For more information on how your company can receive financing for energy efficiency projects, visit [www.energocredit.ge](http://www.energocredit.ge), or call +995 32 224962.

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