

Challenge

A hotel located on the Adriatic Sea in southern Croatia used an old, energy-intensive system for heating and cooling and was looking for ways to upgrade to a less costly and more efficient system.

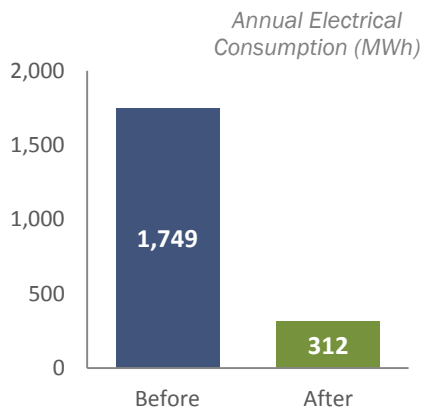
Solution

The solution was to replace an existing sanitary hot water boiler and air-water cooling unit with a “water-water” geothermal heat pump that uses waste heat from its compressor to heat the sanitary hot water.

Energy Savings – 71%

Energy Production – 1,418 MWh/yr

Investing in the new geothermal heat pump system resulted in total energy savings of 71% and also in a renewable energy production of 1,418 MWh/yr. In addition, the operational and maintenance costs were decreased, heat losses in pipes were minimized, and boiler efficiency and total coefficient of performance (COP) were improved.



Implemented through the EU/EBRD WeBSEFF program

Company

Country	Croatia
Sector / Asset type	Commercial (hotel)
Project type	EE/RE
Main business activity	Energy Services Company (ESCO)

Project Facts and Benefits

Investment value	EUR 254,118
Loan amount	EUR 104,300
Energy savings	1,437 MWh/yr
Energy production	1,418 MWh/yr
Decrease of CO ₂ emissions	345 tonnes/yr
Equivalent cars removed	74
Equivalent trees planted	8,940
Annual monetary savings	EUR 105,441/yr
Payback period	2.4 years
ROI	41%