GROUND SOURCE HEAT PUMP SYSTEMS AND PUMP EXCHANGER SYSTEMS IN JORDAN

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ABSTRACT

This paper aims to study the potential of renewable energy sources systems in Jordan by analyzing the use of the Ground Source Heat Pump Exchanger Systems. The paper discusses appropriate design and relates issues. Our focus, in this study, is the Shallow Geothermal Systems, depending on the ground loop that exchanges heat with the earth using the interior heat pump units that transfer heat between the ground loop and the conditioned spaces of a building. How quickly the system costs pay off depends in part on each system's heating and cooling requirement, that's means that unlike drilling for shale oil, geothermal energy is considered to be one of the cleanest, most efficient and safest forms of renewable energy.
The American University of Madaba in Jordan, owned by the Latin Patriarchate of Jerusalem and blessed by the Pope, has installed about 1.4MW for heating and about 1.7MW for cooling system. The system comprises a unit for the College of Science Building (A) and the college of Business Building (B).

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