



## Energy & Environmental Analysis and Planning

Project Location:	POLIZOIS NIKOS S.A. Technical Construction Company P.O. 22, Ionia Thessaloniki GR-570 08 Greece
Building type:	Office building adjacent to workshop/warehouse
Total Conditioned Area:	Office building: 237,5 m <sup>2</sup>
Peak Heating Load:	22,0 kW
Peak Cooling Load:	23,5 kW
 <p style="text-align: center;">Installation of horizontal ground heat exchanger (Slinky®)</p>	 <p style="text-align: center;">Daikin VRV-WII Heat Pump</p>
Project size:	<ul style="list-style-type: none"> <li>• Total Trench Length = 340 m (along to the perimeter of total building ground)</li> <li>• Trench width: 1,5 – 2,0 m</li> <li>• Total Pipe Length = 5.000 m</li> </ul>
Heat Pump:	DAIKIN Water Cooled Variable Refrigerant Volume (VRV-WII) - Type: RWEYQ10MY1
How did GLD help with the design?	<p>VRV-WII has considerable potential for use in Geothermal energy projects, but has a specific limitation when operated as closed loop GSHP – the unit has to be connected to water circuit (ground heat exchanger) at a mandatory 10 – 45°C temperature.</p> <p>GLD software helps us to carefully design ground loop, in this particular case, keeping to the restriction of unit inlet temperature at 10°C. The system has been operating smoothly, and have noted that the ground loop provides the predictable temperature</p>