

Italy, Geothermal District

Heating systems of the Municipality of Pomarance

General

Region/city/ location	Tuscany/Province of Pisa/Municipality of Pomarance	Contact	GES S.P.A. Roberto Amidei r.amidei@gespomarance.it
Description	Pomarance has 8 DH networks. They use steam at 60t/h to heat the city and its hamlets. The total networks are 60 MWth and supply buildings and one industry. A flow rate regulating system saves 30 % of energy.		

Project

Inhabitants connected	2500	Production of heating and/or cooling	Heating only: 49,7 GWh/year in 2012
Installed geothermal capacity	60 MWth	Comparison with fossil energies	110-120€/MWh
Others uses (drinking water, cascade uses...)	Industrial purposes		

Financing

Investment for geothermal well	Wells were already existing, since geothermal heat is provided from Enel Green Power wells dedicated to electricity generation	Investment for geothermal heating station	2,0Mio €
Investment for DH network and substation	28,0Mio €	Cost of MWh sold	53-63€/MWh
Financing	"European funds: 20 Mio € Local institutions funds: 1,5Mio €		

Own funds / bank: the remaining amount"

Technical

<p>Installed capacity (MWth)</p>	<p>60MWth, referred to all GeoDH networks installed in the municipality of Pomarance</p>	<p>Temperature of the geothermal resource (production - injection)</p>	<p>Superheated steam at 190-220°C</p>
<p>Operating Temperature of the DH</p>	<p>120°C – 80°C</p>	<p>DH Length (m)</p>	<p>100000m, referred to all GeoDH networks installed in the municipality of Pomarance</p>
<p>Innovation if any</p>	<p>"Flow rate regulating on utilities. In intermediate seasons, the installation of regulating valves on 60% of the network, resulted in 30% of energy saving Remote control: the system can be managed (including failure displaying) via smartphone, tablet, pc remote. This allows to have lower management costs."</p>		



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