



Welcome to the Blackpool Hilton.

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Ground Source Heat Pumps.

From an installers point of view.



What is a Ground source heat pump.

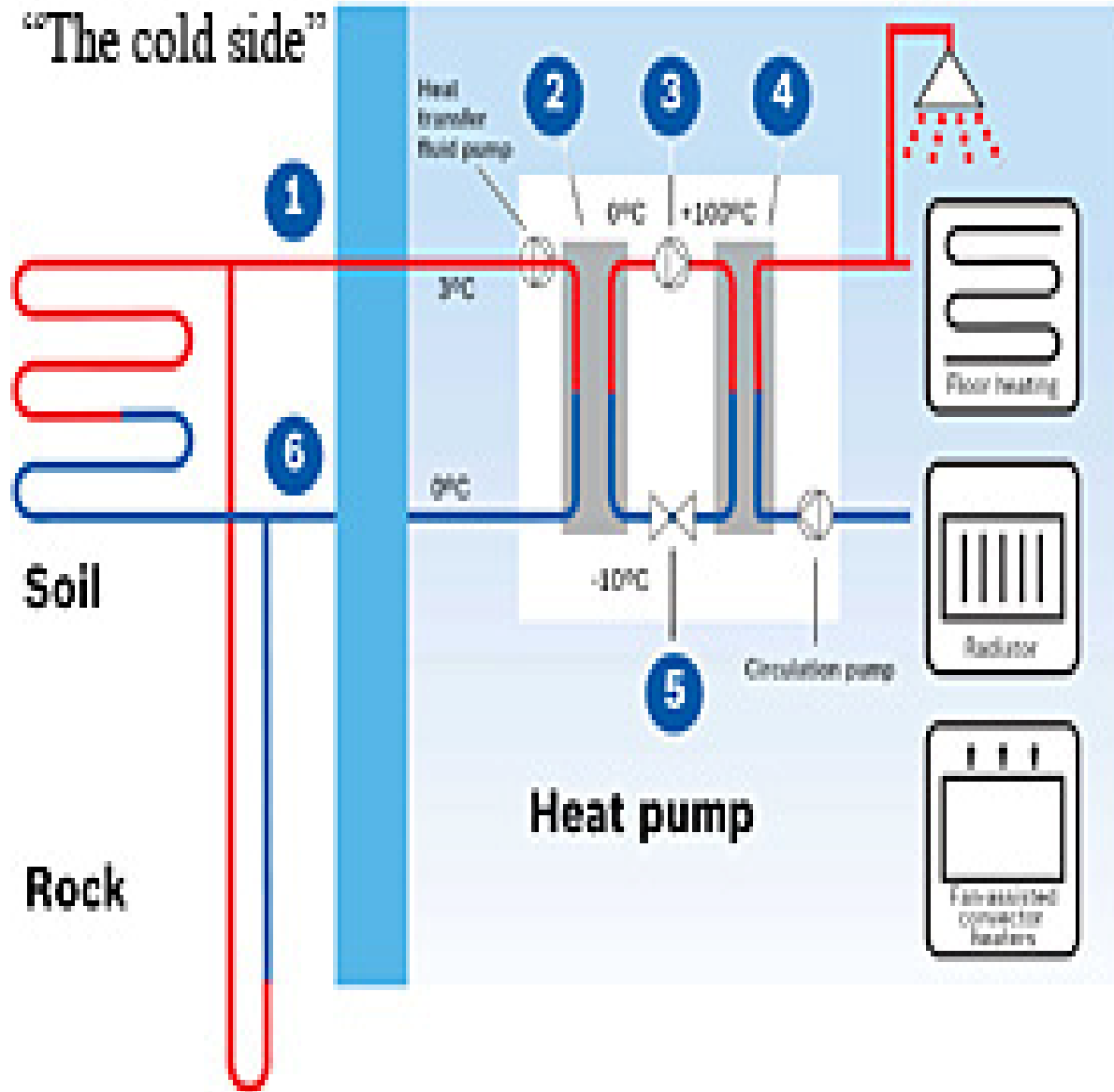
- A unit that takes solar energy from the ground.
- It then produces heat energy for the home.
- Can be used for both heating and hot water.

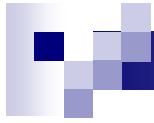


How does it work.

“The cold side”

“The hot side”





What are the advantages.

- It can be used for heating and hot water.
- It taps into a highly stable temperature below ground.
- An ideal heat source for under floor heating and radiators.



Installation.

- Heat loop.
- Unit. (Ground source heat pump)
- Heating system.

Heat loop.



Straight pipe trench.



Bore Hole.

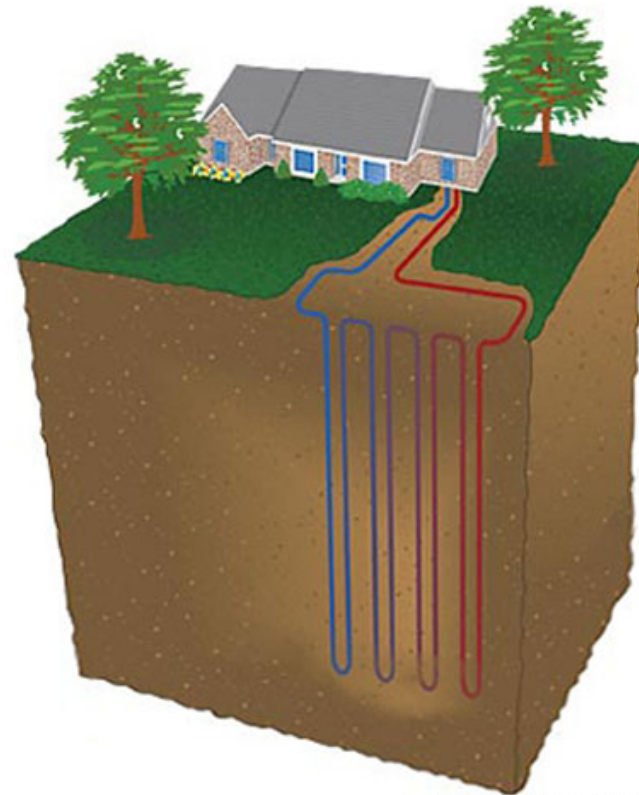


Image courtesy of ClimateMaster



Heating System.

- Best use of the heat is via under floor heating.
- If radiators are used they need to be larger than usual.
- Hot water via a unvented cylinder.
- Can be used in conjunction with solar panels for hot water.

Under floor heating.






How much does it cost?

- A typical system costs 7-12k.
- On average you can save £400 - £800 pa
- An average system saves 2-8 tonnes of CO₂ pa (depending on the type of fuel you are replacing).



Grants.

- Grants are available to encourage more installations.
- Energy companies are looking to fund more installations.
- www.lowcarbonbuilding.org.uk



Summary. (why GSHP).

- Renewable energy source (solar energy).
- Excellent environmental performance. (low CO₂ emissions 30-40% better than gas).
- Low running cost. (gshp can be ½ that of the best gas system if fitted in a super insulated home).
- Long component life. (50yrs for the ground loop, 25yrs for the heat pump).
- No gas or annual maintenance.



And finally



Global warming.

- Please take a moment to think of the polar bear.
- Thank you.