REGEOCITIES

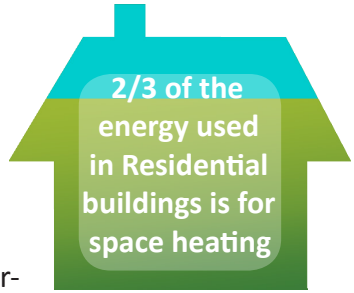
Make your city smarter and sustainable:

Implementing Geothermal in cities

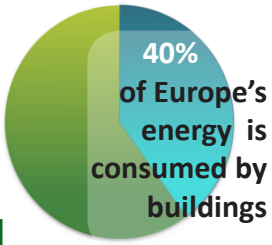
Shallow Geothermal Systems (0-400m depth) can harness **thermal energy from the underground** to be used in the **heating and cooling** systems of buildings and for domestic hot water.

The average **energy savings** are as much as **50% in winter** and **40% in summer.** Savings in cooling of up to **90% are possible**.

Shallow Geothermal technology, including **Ground Source Heat Pumps** and **Underground Thermal Energy Storage** harnesses a renewable energy source with a vast potential for energy savings and emission reduction.



The resource is both valuable and under-exploited. In some municipalities, the technology is simply not used and there is **no regulatory system.** In other countries, where geothermal is widely adopted, we sometimes see **over-regulation**.



The ReGeoCities Project Aims to:

1. **Overcome barriers** referred to regulation of geothermal resources and administrative procedures;
2. Transfer **best practices** on regulations from mature to juvenile regions;
3. Develop a proposal for **common regulatory framework** and a suggested standard database for shallow geothermal installations;
4. Engage **local administrations** to implement project results and include the technology into municipal and regional energy plans;
5. Organise **training courses** for energy managers and civil servants from cities and regions;
6. Achieve the **smart-cities** concept with shallow geothermal systems;
7. Contribute to making our cities sustainable and efficient, while **reducing citizens' energy bills**.

Advantages of shallow geothermal applications for heating and cooling

- Reducing primary energy consumption by **at least 50%**
- **Reducing CO_2** emissions by 70-75%
- **Reducing operation costs** by 3-4 times
- Enabling compliance with the **renewables and energy performance of buildings** requirements.

Energy Efficiency and CO_2 Emissions by Heat source

System	Primary Energy Efficiency (%)	CO_2 emissions (kg CO_2/kWh heat)
Oil fired boiler	60 - 65	0.45 – 0.48
Gas fired boiler	70 - 80	0.26 – 0.31
Condensing Gas Boiler + low temperature system	100	0.21
Electrical heating	36	0.9
Conventional electricity + GSHP	120 - 160	0.27 – 0.20
Green electricity + GSHP	300 - 400	0.00

Do you represent:

- **A Local Authority ?**
- **A Geothermal Company?**
- **The Building Sector?**
- **An Energy Service or HVAC company?**

Visit:

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Co-funded by the Intelligent Energy Europe Programme of the European Union