EGEC Action Plan

Eight point plan to REpowerEU with Geothermal

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EGEC GEOTHERMAL

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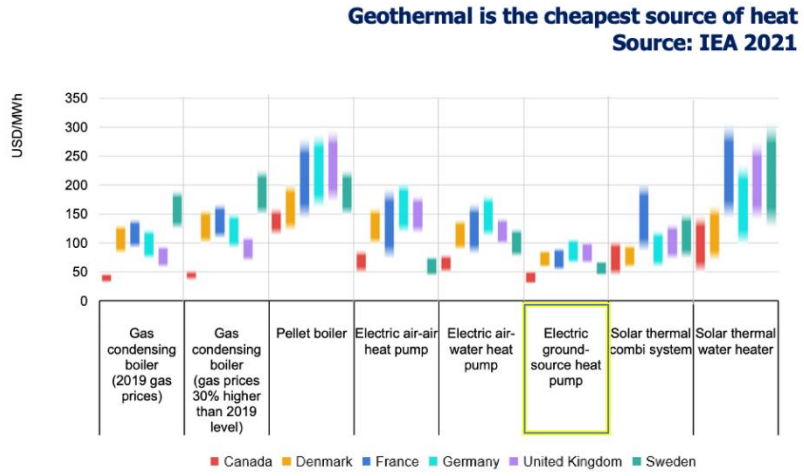
Geothermal is:

- **Cheaper than fossil and other renewable heat sources** in many Member States according to the International Energy Agency ADEME, the French energy agency, found that the levelised cost of geothermal district heating was €15 MWh compared to €51 MWh from fossil sources already in 2019.



- **Good for property values:** In Sweden, household retail agencies found houses with Geothermal Heat Pumps increased property prices by about €10-12,000.

- **The *'go to'* solution for urban and rural cities:** Cities all over Europe are opting for large-scale geothermal district heating systems.

- **Grid balancing:** Geothermal provides baseload electricity solving **security of power supply threats** by removing dependence on the import of fossil fuels from third countries.

- **Available everywhere**. Heat reservoirs and basins have only been mapped in some regions and in some countries. Over 25% of the EU's population can be supplied by geothermal district heating by using resources mapped in 2013. Combined with geothermal heat pumps , nearly half of the EU's heat demand can be met by 2030.

- **Sustainable lithium, made in Europe, and other mineral extraction:** Geothermal operations in Germany, France, Italy and the UK have started to extract lithium hydroxide and other related lithium chemicals from existing and new geothermal capacity. This zero-emission extraction is the foundation of a sustainable lithium-ion battery value chain in Europe.

Eight actions to allow geothermal to REpowerEU

Geothermal heating, cooling and power has already saved 10 bcm of gas and other fossil energy imports from Russia.

Table 1 – Russian gas imports savings from geothermal

Timescale	Geothermal district heating and cooling	Geothermal heat pumps
2022	2 GWth deployment or 1 bcm of Russian gas savings by 2022.	Additional 4 GWth savings or 2 bcm of Russian gas by 2022.
2025	7-11 GWth deployment or 3.5-5 bcm of Russian gas savings per year by 2025.	Additional 25 GWth, or 9,3 bcm by 2025.
2027	14 GWth or 7.5 bcm savings of Russian gas by 2027.	Additional 40 GWth or 15 bcm by 2027.

To frontload investment in geothermal energy and reap the savings above the following are required by the end of 2022:

1. Geothermal and ambient heat pump accelerator

This should comprise:

- **Renewable District Heating and Cooling infrastructure Fund:** There is no single fund for renewable district heating and cooling systems. The Modernisation Fund and Just Transition Funds are available only in some territories or Member States. The fund should pay for the total cost of installation for fuel poor households, and the investment in modernisation and in new renewable district heating and cooling systems.

- **Addressing fuel poverty households:** Households that cannot pay to turn on heating are unlikely to be able to afford and manage heat and building renovation. Therefore, the total cost of installation of geothermal and other renewables should be paid by the EU fund.

- **An EU Industrial Strategy**: to ensure the installation of millions of geothermal heat pumps and district heating systems, full availability of skills and training provision which ensure no one is left behind from the energy transition.

Result: Enables delivery of the targets outlined above.

2. Fast permitting, quick deployment

- **Geothermal district heating & cooling:** There are over 4 GWth energy of geothermal district heating and cooling plants awaiting permitting approval. They must be fast-tracked before the end of the year 2022.

  All Member States must publish and make readily accessible all available geological data from past water, oil, gas and mining drilling to facilitate private sector investment.

  Result: 4 GWth installed savings or 1 bcm of gas by 2022.

- **Geothermal heat pumps:** All Member States must publish and make readily accessible geological maps identifying areas where a simple notification or a permit are required in a 'traffic light' system. This should clearly mark the 'go-to' areas for geothermal heating systems. All this information already exists in national geological surveys. Some Member States (France, Denmark, Sweden) and regions (German Lander, Tuscany) already make this available. It must be the norm everywhere.

  Result:

  Additional 300,000 units or 4 GWth savings or 2 bcm by 2022.
  Additional 1,800,000 units or 25 GWth, or 9,3 bcm by 2025.
  Additional 3,300,000 units or 40 GWth or 15 bcm by 2027.

3. Accelerating Geothermal heating network planning

Geothermal community and district heating & cooling systems deliver large-scale renewable heating across urban and rural areas. Many cities have and continue to invest in these large-scale projects, which are the optimal solution to mass conversion away from Russian gas imports.

Result: Enables delivery of the targets outlined above.

4. De-risking investments

An EU risk management framework will de-risk and therefore reduce the total capital cost of renewable energy projects. An EU-wide de-risking framework, pooling multiple technologies, will significantly reduce transaction costs and allow for project development across 'go-to' areas in the internal market. It ensures access across the internal market, especially in Member States that do not operate such schemes. **Many Member States are creating national risk mitigation schemes as they can leverage large volumes of private capital.** For example, for everyone €1 spent in the French scheme, €42 was leveraged from the private sector.

Result: Enables delivery of the targets outlined above.

5. Direct support to the deployment of 1,000 geothermal cities

The EU must directly procure drilling capacity to deploy 1,000 geothermal cities by 2027, **to supply heat and power as well as sustainably extracting lithium and other raw materials.** This will build a pipeline of projects which also acts as a pathway for the oil and gas service sectors to transition to renewables whilst providing abundant supplies of very low-cost energy prices to households, businesses and industry.

Result: 14 GWth or 7.5 bcm savings of gas by 2027.

6. Mobilise a skilled workforce

To accelerate the implementation of the **Renewable Energy Directive (Article 18)** on training and certification, all Member States shall make training for reskilling and upskilling, and certification schemes of professionals to a sufficient scale by the end of 2022.

The availability of qualified workers must be frontloaded. Installing a renewable heating and cooling system, drilling a well for a geothermal project, energy efficiency retrofit, takes a given amount of working hours. Scaling up deployment will require a great increase in the qualified workforce to implement the measures of RePowerEU, in line with the EC proposals for the recast **Renewable Energy Directive and Energy Efficiency Directive**.

Result: Enables delivery of the targets outlined above.

7. Implement the recently agreed VAT Directive

The Council agreed to phase out reduced VAT rates or exemptions on fossil fuels and other goods with a similar impact on greenhouse gas emissions, by 1 January 2030. This should be brought forward to 2022.

Furthermore, we recommend an addendum environmentally-friendly goods and services list, for which reduced rates are allowed, to ensure renewable heating and cooling technologies also benefit from the same rating granted to solar panels, electric bicycles and waste recycling services.

Result: Enables delivery of the targets outlined above.

8. Industrial decarbonisation with renewable heating and cooling

Half the heat consumed in industrial processes is low to medium temperature ranges. Geothermal heating can cover these industrial sub-sectors and processes but requires dedicated funding from the Innovation Fund for their demonstration. Dedicated calls should be run throughout the year to ensure maximum coverage.

Heat Purchase Agreements (HPAs) for corporates will accelerate industrial decarbonisation. An EU campaign is required to promote these to industrial, food, beverage and local authorities to provide long-term heat supply at cost-effective prices.

Result: Enables delivery of the targets outlined above.

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