

# GEO THERMAL IWG



SET Plan Geothermal Implementation Working Group

2024

# Geothermal Implementation Working Group

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- The IWG is a forum where the **geothermal energy industry, the research community & public authorities** align efforts to accelerate the energy transition through research & innovation for the deployment of geothermal energy

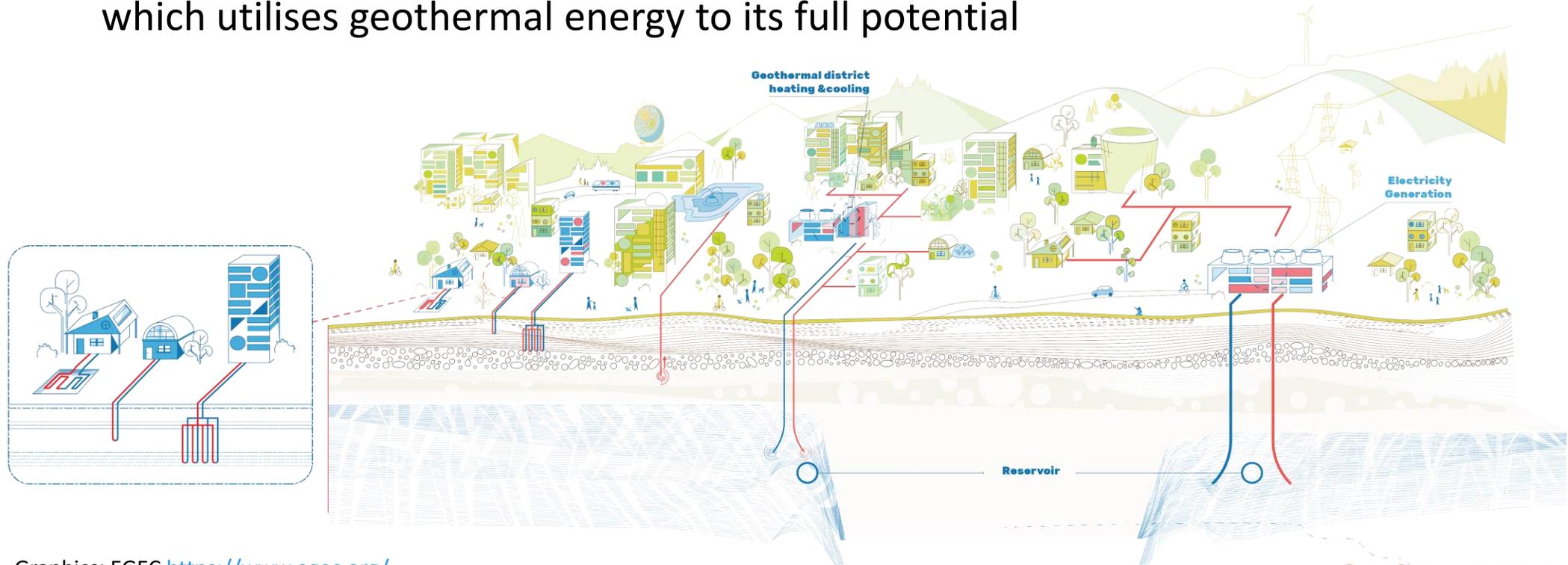
## IWG Members:

- SET Plan Member States
- European Commission
- EERA Joint Programme Geothermal
- ETIP Geothermal & ETIP RHC
- EGEC



# Mission

- **Coordinate research & innovation efforts for a resilient & climate-neutral Europe which utilises geothermal energy to its full potential**



Graphics: EGEC <https://www.egec.org/>

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# Energy Transition & International Collaboration

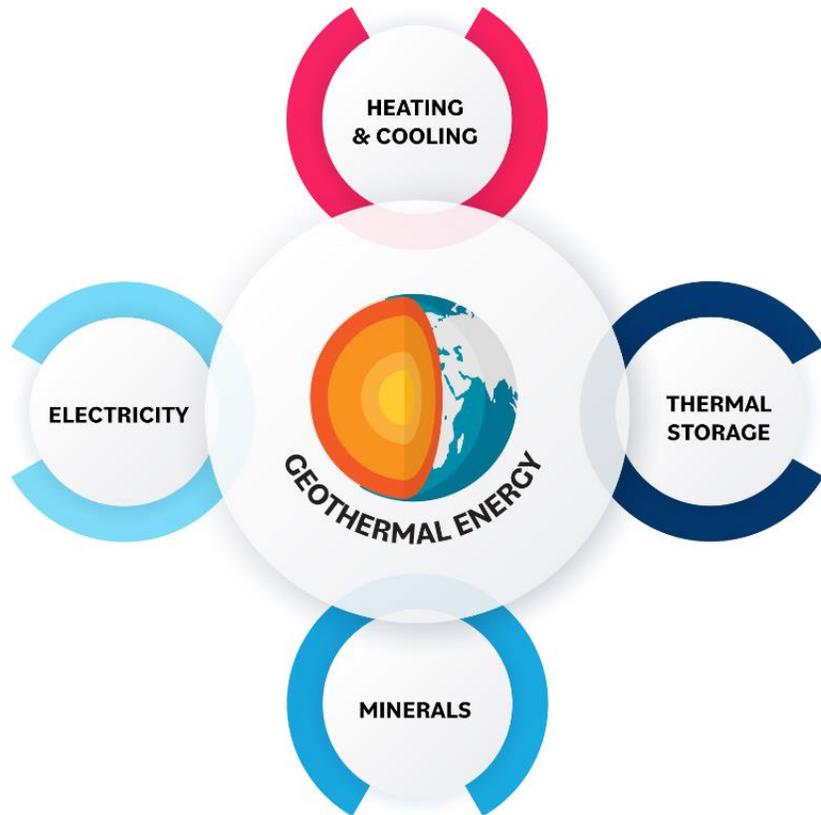
- The IWG supports the European **Strategic Energy Technology Plan**
- **The SET Plan** aims to accelerate the deployment of green technologies
- **Collaborates** with GEOTHERMICA Initiative, ETIP-Geothermal & EERA Joint Programme
- **Knowledge-sharing & outreach**
- **Data gathering & reporting**



GEOTHERMAL IWG

# Geothermal Energy

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- Sustainable energy source
- Local source of energy
- Cost-effective
- Heating & cooling
- Electricity production
- Thermal storage
- Co-production of critical raw materials (CRM)

# Heating & Cooling

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- **Vision for 2050** – Geothermal heat supplies more than:  
25% of Europe's demand for space heating & cooling;  
25% in the agricultural sector (greenhouses);  
5% in industrial sectors
- **Local dispatchable source**, main use of geothermal in West & Central Europe
- **25% of European cities** are located in regions suitable for direct use



# Electricity – Power Production

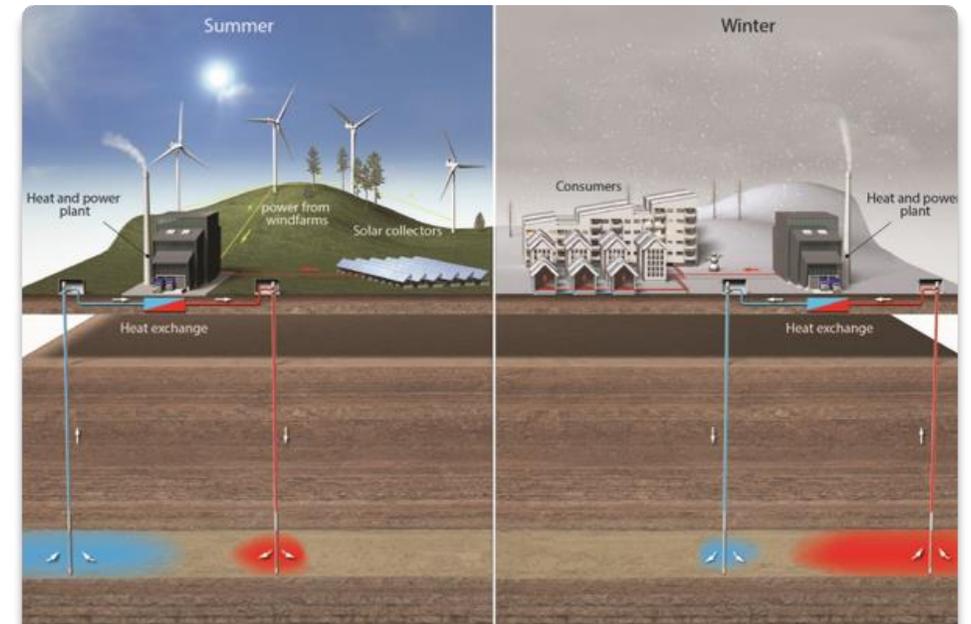
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- **Vision for 2050 – 10% of the power production** in SET Plan countries is from geothermal power
- **Cost-effective baseload** or dispatchable electricity production
- **Innovation** can boost the potential for Europe
  - Super hot & super critical
  - Magma energy
  - Offshore geothermal
  - New technologies & new materials



# Underground Thermal Energy Storage (UTES)

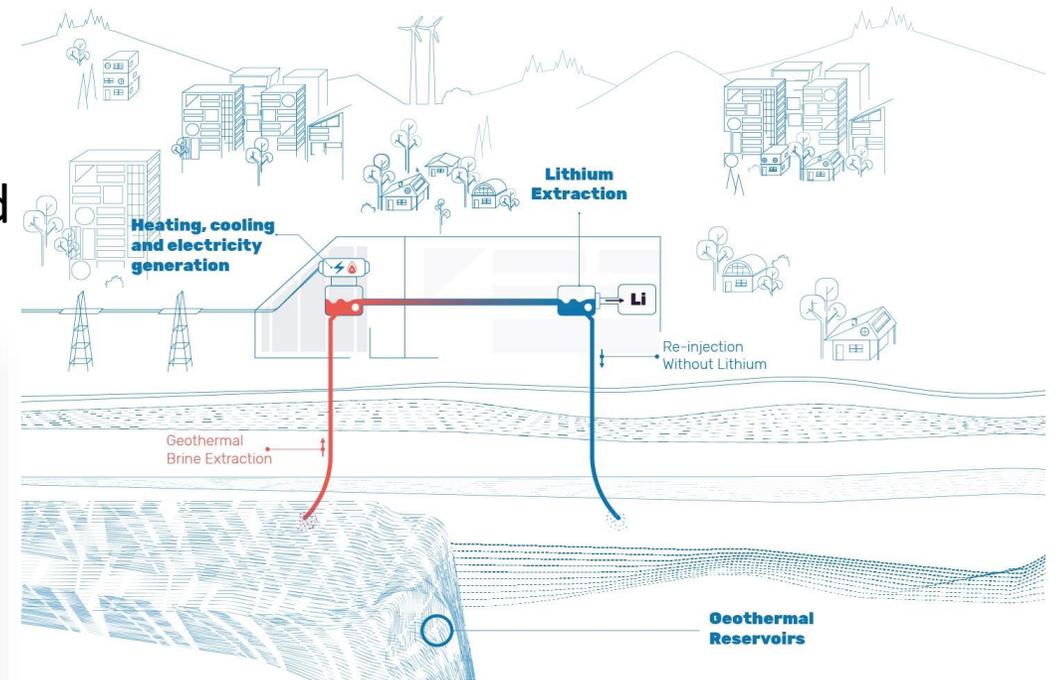
- **Vision for 2050** – UTES supplies more than 10% of Europe's demand for space heating mainly for district heating
- **50% of the European energy demand is for heating**
- **Bridging the winter peak** is essential
- **Scale of subsurface** needed



Graphics: <https://heatstore.eu>

# Critical Raw Materials (CRM)

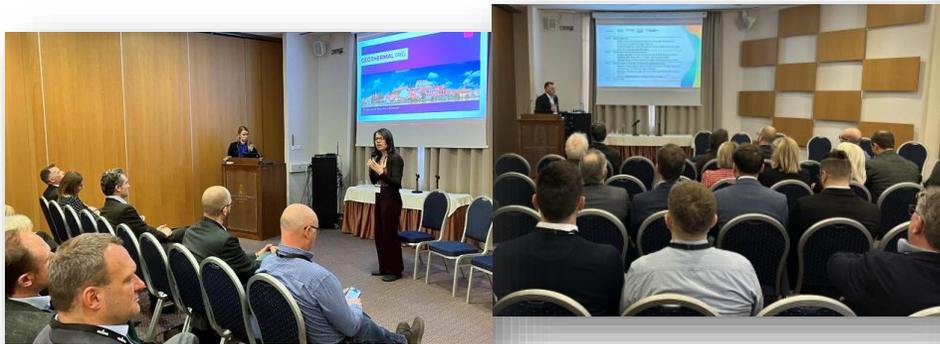
- **Vision for 2050** – Co-production of minerals and critical raw materials (CRM) such as lithium for resilient transportation sector and strategic autonomy is established in at least 10 European regions
- Indigenous source of **Li for car batteries**
- Other uses of geothermal minerals such as **Si**



Graphics: EGEC <https://www.egec.org/>

# Geothermal IWG Membership

- Members of the IWG gain access to **information, workshops & meetings**
- Members get a “**seat at the table**” & thus influence geothermal energy development
- There is **no cost** associated with membership



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