

RepowerEU e le misure chiave per la geotermia

Pisa, 3 Marzo 2023

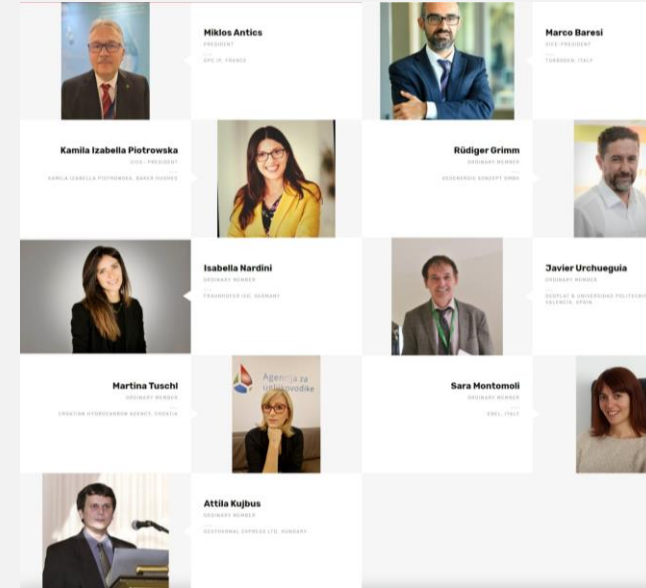


Marco Baresi – Vice Presidente EGEC

EGEC – European Geothermal Energy Council

- Fondata nel 1998 Bruxelles
- 28 paesi rappresentati
- 170+ membri
 - developers
 - fornitori tecnologia,
 - utilities ed enti pubblici
 - associazioni nazionali
 - centri di ricerca
 - geological surveys

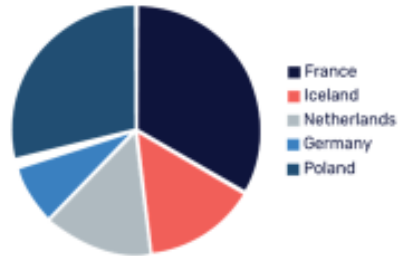
<https://www.egec.org/>



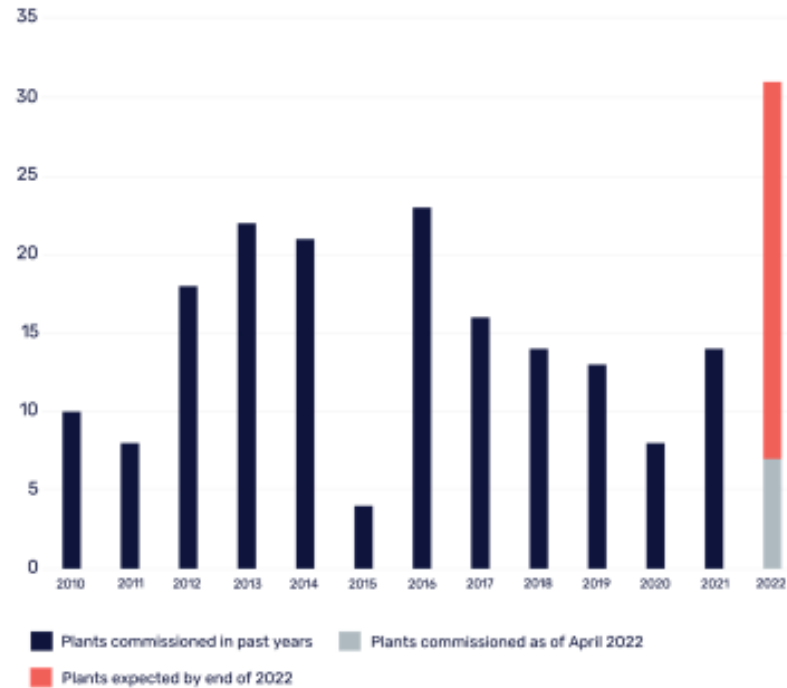
- President: Miklos Antics (GPC IP)
- Marco Baresi (Turboden)
- Sara Montomoli (ENEL Green Power)
- Rüdiger Grimm (geoENERGIE Konzept GmbH)
- Isabella Nardini (Fraunhofer IEG)
- Kamila Izabela Piotrowska (Baker Hughes)
- Martina Tuschl (Croatian Hydrocarbon Agency)
- Javier Urchueguía (Universidad Politécnica de Valencia & GEOPLAT)
- Attila Kujbus (Geothermal Express)

Geothermal market report 2021

District heating

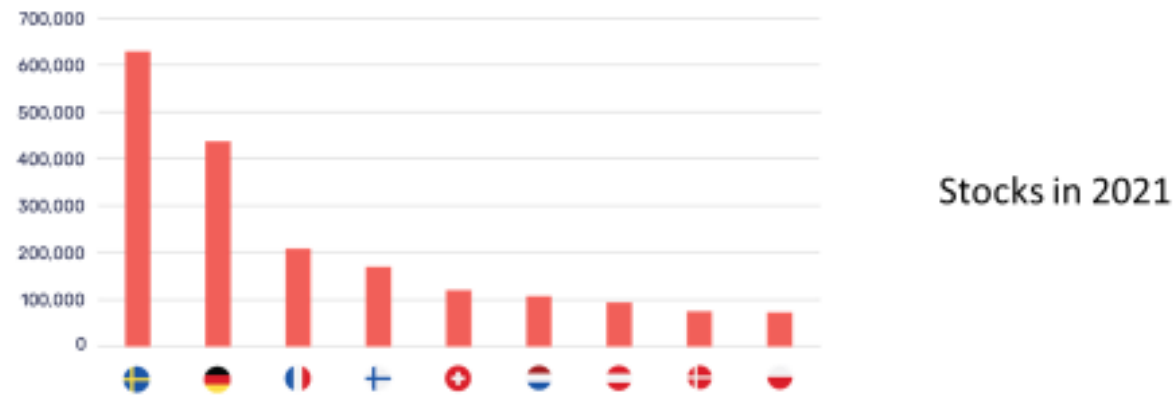


New plants commissioned in 2021

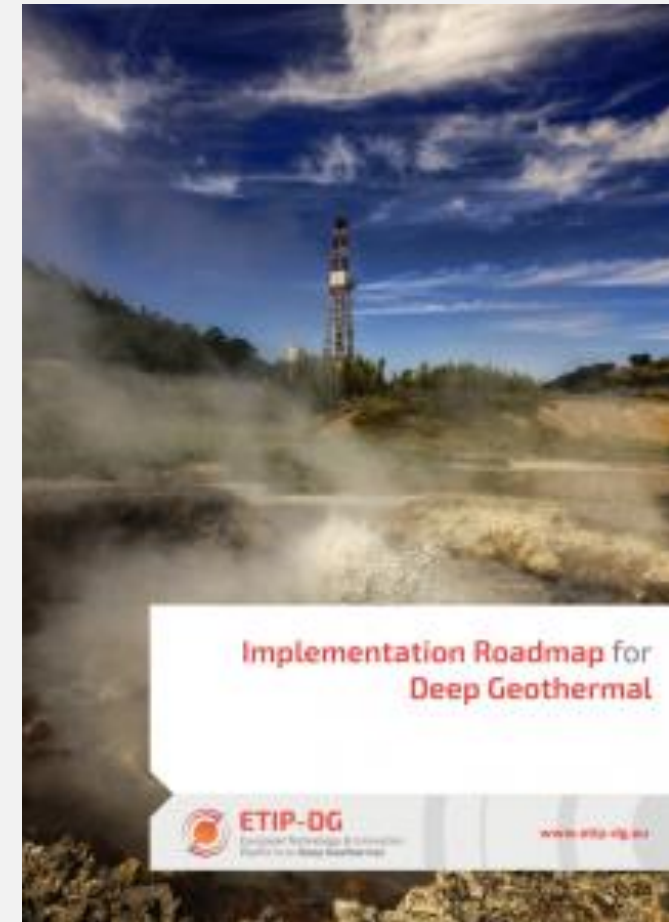
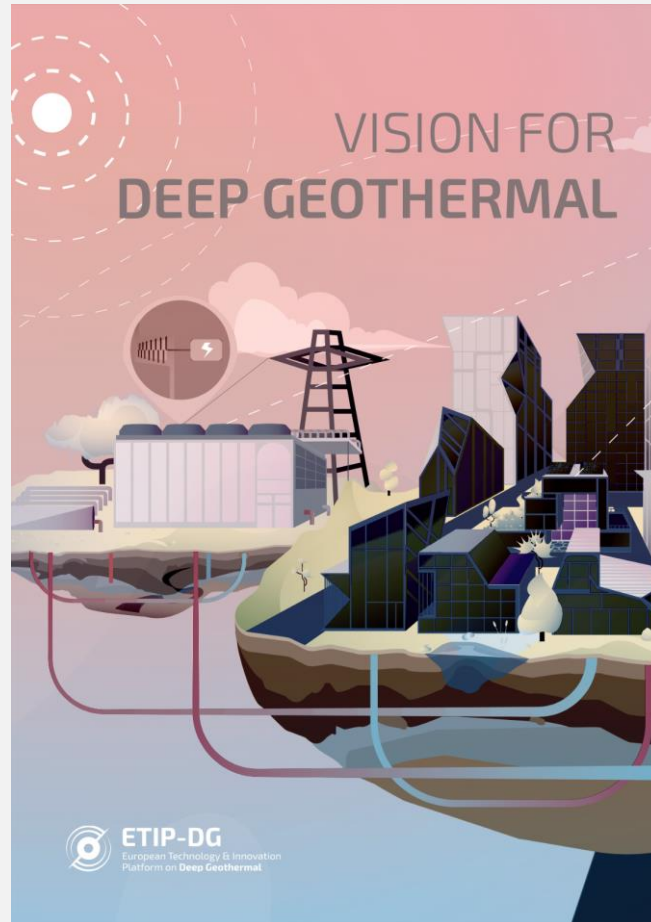


Geothermal market report 2021

Geothermal heat Pumps



ETIP – EU Technology Innovation Platform Geothermal



<https://www.etip-dg.eu/>

DELIVERING THE EUROPEAN GREEN DEAL

THE DECISIVE DECADE

The EU will **reduce its net greenhouse gas emissions by at least 55% by 2030**, compared to 1990 levels, as agreed in the EU Climate Law. On 14 July 2021, the Commission presented proposals to deliver these targets and make the European Green Deal a reality.

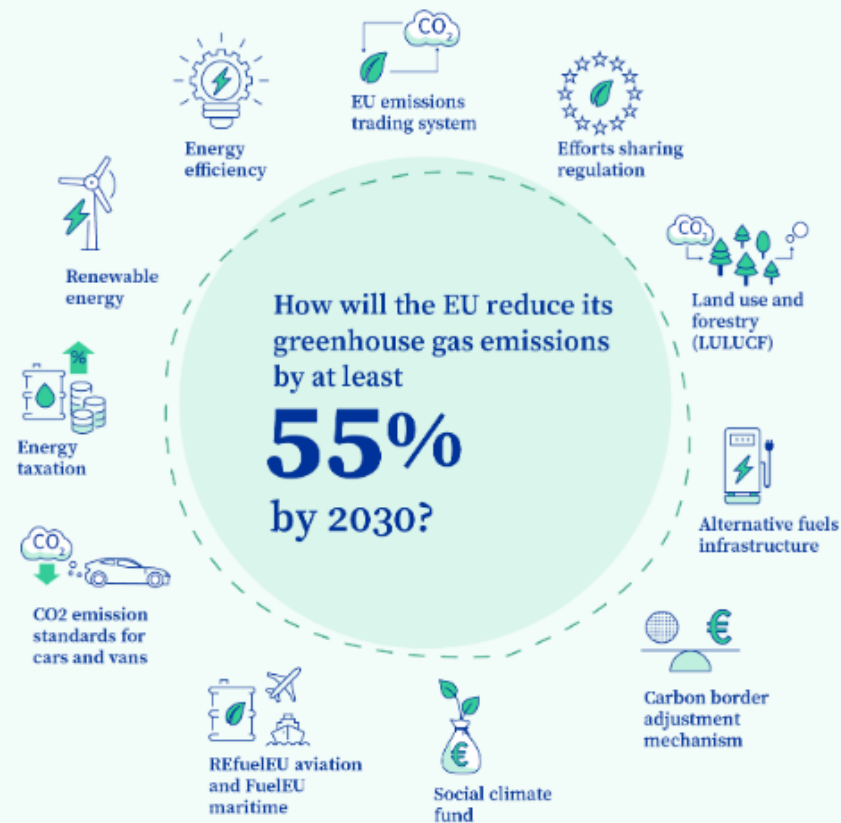


European Green Deal

The [European Green Deal](#), approved in 2020, is a **set of policy initiatives** by the European Commission with the overarching **aim of making the EU climate neutral in 2050**.

The plan was to **review each existing law on its climate merits**, and introduce new legislation including on the circular economy, building renovation and innovation.

Fit for 55: how the EU will turn climate goals into law



Fit for 55 package

In order to deliver the Green Deal, existing legislation are revised, and new legislative initiatives put in place, under the [‘Fit for 55’ package](#), launched in 2021.

These legislative proposals under the ‘Fit for 55’ package are intended to ensure the EU achieves the **-55% emission reduction target by 2030** compared with 1990 levels.

In particular, the package launched the revision process of key legislation for the geothermal sector such as the [Renewable Energy Directive \(RED\)](#), the [Energy Efficiency Directive \(EED\)](#) and the [Energy Performance of Buildings Directive \(EPBD\)](#).

The Recovery and Resilience Facility



RECOVERY AND RESILIENCE FACILITY:
HELPING EU COUNTRIES TO COME OUT OF THE CORONAVIRUS CRISIS STRONGER
#EUSolidarity #StrongerTogether

- ## THE 6 PRIORITIES
- 1 GREEN TRANSITION
 - 2 DIGITAL TRANSFORMATION
 - 3 ECONOMIC COHESION, PRODUCTIVITY AND COMPETITIVENESS
 - 4 SOCIAL AND TERRITORIAL COHESION
 - 5 INSTITUTIONAL RESILIENCE
 - 6 POLICIES FOR THE NEXT GENERATION



REPowerEU

Reacting to the energy crisis

A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition. The Recovery and Resilience Facility (RRF) is at the heart of the REPowerEU Plan implementation, providing additional EU funding.

SHORT TERM MEASURES

- **Common purchases of gas, LNG and hydrogen via the EU Energy Platform** for all Member States who want to participate as well as Ukraine, Moldova, Georgia and the Western Balkans
- **New energy partnerships** with reliable suppliers, including future cooperation on renewables and low carbon gases
- **Rapid roll out of solar and wind energy projects** and renewable hydrogen deployment to save around 1.5 million tonnes of CO₂ by 2027
- **Increase the production of biomethane** to save around 1.5 million tonnes of CO₂ by 2027

Approval of first **EU-wide hydrogen projects** by the summer

An **EU Save Energy Communication** with recommendations for how citizens and businesses can save around 13 bcm of gas imports

Fill gas storage to 80% of capacity by 1 November 2022

EU-coordinated demand reduction plans in case of gas supply disruption

MEDIUM-TERM MEASURES TO BE COMPLETED BEFORE 2027

- **New national REPowerEU Plans under the modified Recovery and Resilience Fund** – to support investment and reforms worth €300 billion
- **Boosting industrial decarbonisation** with around €3 billion of frontloaded projects under the Innovation Fund
- **New legislation and recommendations for faster permitting of renewables** especially in dedicated ‘go-to areas’ with low environmental risk
- **Investments in an integrated and adapted gas and electricity infrastructure network**
- **Increased ambition on energy savings by raising the EU-wide target on efficiency for 2030 from 9% to 13%**

- **Increase the European renewables target for 2030 from 40% to 45%**
- **New EU proposals** to ensure industry has access to critical raw materials
- **Regulatory measures to increase energy efficiency in the transport sector**
- **A hydrogen accelerator** to build 17.5 GW by 2025 of electrolyzers to fuel EU industry with homegrown production of 10 million tonnes renewable hydrogen
- **A modern regulatory framework for hydrogen**

These investments include:



€29 billion in the power grid by 2030 to enable greater electricity use



€37 billion to increase biomethane production by 2030



€ 10 billion investments to import sufficient LNG and pipeline gas by 2030



€56 billion for energy efficiency and heat pumps by 2030



€1.5-2 billion for security of oil supply



€113 billion for renewables (**€86bn**) and key hydrogen infrastructure (**€27bn**) by 2030



€41 billion for adapting industry to use less fossil fuels by 2030

€210 billion by 2027



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REPowerEU

On 18 May 2022, the Commission presented its [REPowerEU plan](#) as a response to the hardships and global energy market disruption caused by Russia's invasion of Ukraine.

Among others, **this will translate in further measures to be included in the RED, EED and EPBD revision.**

REPowerEU for geothermal

Area	Policy response	Outcome
Targets	Tripling geothermal capacity by 2030 (EU Solar Energy Strategy)	
	Increase of RES target from 40% to 45%	Includes binding RES heating and cooling sub-target
Permitting (deep)	Renewable go-to areas to be defined by Member States, with single point of contact and streamlined permitting process	Major opportunity for geothermal electricity and cogeneration plants
Permitting (shallow)	Emergency fast-track permitting process for geothermal heat pumps and open-loop systems (up to 50 MWth) within 3 months	Major green light for geothermal heat pump market but reliant on traffic light system for permitting and simple notifications. Note - this is the first time geothermal is mentioned in EU law in connection to heat pumps
Financial Risk	Member States to set up their own systems	Harmonisation across the EU or between Member States is the most optimal solution
Local authority heat planning	Mandate for local authorities with 35 000 inhabitants to prepare renewable heating plans	Essential that these plans are based on local RES and interact with geological surveys

Next steps

Focus shifting to Member State implementation. Key areas are:

- **National Energy & Climate Plans (NECPs):** Member States will update their national policies and measures to meet the new climate and energy targets in 2023. It is essential that these updates include practical support measures (targets, finance, permitting and support for consumers to invest in geothermal).
- **National geothermal strategies:** France, Germany, Poland and Ireland issued national strategies for geothermal in 2022/2023 and are legislating now to mainstream it. Denmark, Finland, Netherlands and Hungary have support measures for geothermal district heating and heat pumps;
- **Renewable 'go-to areas':** These identify where geothermal and other renewable plants can be built and a streamlined permitting process. Essential to use this as an opportunity for geological surveys to map geothermal potentials and capacity building for permitting agencies using the Life-cycle environmental impact assessment tool.

Next steps

- **Electricity Market Design (EMD):** This provides an opportunity for regulatory support to reward dispatchability and flexibility services to the grid and designing auctions for geothermal electricity. Commission to launch its proposal in March 2023.
- **Geothermal lithium:** Expect support from the Critical Raw Materials Act and the Green Deal Industrial Plan (both to be launched in March 2023) to support investment in new capacity.
- **Repurposing the Recovery & Resilience Facility (RRF):** Member States have been invited to update their investments. Few countries support geothermal in their original plans (Poland, Bulgaria, Estonia) but the funding was at a low level.

The missing pieces of the jigsaw

- **Harmonised financial risk mitigation:** Germany and Poland preparing financial risk mitigation schemes as outlined in government agreements or national roadmaps. Netherlands updating SDG++. However, need to continue to advocate for an EU or regional financial scheme.
- **Heat Purchase Agreement (HPA) market:** Crucial for an industry-led approach to developing the market for geothermal HPAs based on power generation, cogeneration or trigeneration models.
- **Geothermal Action Plan:** In 2022 the geothermal industry called for a European geothermal strategy. The Commission said there was not enough time in this mandate. EGEC will propose to set up an industrial partnership, similar to those for hydrogen, biomethane and PV, to directly regulate the market for geothermal across the EU.

The voice of geothermal in Europe

#geothermaldecade

