

European Technology & Innovation Platform on Deep Geothermal

Accelerating the development of **deep geothermal** technology in Europe



ETIP-DG

European Technology & Innovation
Platform on **Deep Geothermal**

		PRIORITIES	2020-2023	2023-2026	2026-2030	Budget
Prediction and assessment of geothermal resources	PA-1	Assessing Deep Geothermal resource potential		2025		€ 250 m
	PA-2	Improved exploration prior to, during and after drilling				€ 50 m
	PA-3	Exploration workflows and cataloguing		2025		€ 50 m
	PA-4	Cutting edge geothermal resources				€ 100 m
Efficient resource access and development	PD-1	Total reinjection and greener power plants				€ 150 m
	PD-2	Reduce the impact of scaling and corrosion while improving equipment and component lifetime				€ 75 m
	PD-3	Efficient resource development				€ 200 m
	PD-4	Improved rate of penetration technology for accessing the resource				€ 165 m
	PD-5	New electronics to monitor and operate geothermal wells				€ 60 m
Heat and electricity generation and system integration	PS-1	Developments in turbines				€ 100 m
	PS-2	Flexible production of heat and power and integration with smart grids				€ 150 m
	PS-3	High-Temperature Underground Thermal Energy Storage				€ 100 m
	PS-4	Developing hybrid plants and exploiting mineral production from geothermal sources				€ 200 m
Non technical priorities		From R&I to deployment				€ 40 m
		Knowledge Sharing				€ 40 m
		Next generation of technologies				€ 120 m



Implementing the ETIP DG Roadmap: Horizon Europe & other opportunities

- Horizon Europe WP 2021-2023
- Sustainable Finance: life cycle emissions threshold
- New EC funding: synergies with Innovation Fund, Modernization Fund, Energy Transition Fund
- GEOTHERMICA call 2019

Innovation Fund

- Technology neutral calls
- Main criteria: CO2 emission reduction potential
- Grant covers 50-75% of additional costs due to innovative technology
- Up to 40% of the grant as “milestone based”
- Workshop on 23/09 in Brussels for Innovation Fund and Geothermal

Sustainable Finance Regulation

- What is “sustainable finance”?
 - Criteria for eligibility of projects to green financial products (e.g. Green bond...)
- Purpose of the regulation: create an harmonised framework to attract more capital to such assets with transparency and tradability
- Stake for the geothermal sector: this regulation’s criteria may define private capital flows to renewable projects

Sustainable Finance Regulation

Proposed criteria for geothermal:

- **geothermal electricity:** “life cycle emission” threshold of 100gCO₂e/kWh, decreasing to 0gCO₂e/kWh in 2050; requirement of compliance with the Water Framework Directive, Air Quality regulations and other European Environmental legislations.
- **geothermal cogeneration or geothermal heat:** ‘The threshold is calculated from the relative production of heat and power, and based on the declining power generation threshold of 100 gCO₂e/kWh(e), and a notional heat threshold of 30 gCO₂e/kWh(th)’ declining to net zero for both metrics by 2050.
- **geothermal heat pumps** to justify a Seasonal Coefficient of Performance of at least 3.33 to be eligible.

