Brochure

The Implementation Working Group on Deep Geothermal

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The Implementation Working Group on Deep Geothermal

In the SET plan, Europe has set its renewable energy ambitions, including for geothermal. A specific geothermal Implementation plan has been released and is now executed.

THE SET PLAN

The European Strategic Energy Technology Plan (SET-Plan) is an integral part of the EU climate and energy policies and aims to accelerate the development and deployment of low-carbon technologies by lowering a number of barriers, technical, economical and socio-political. It also seeks to enhance coordination in national research and innovation programs and increase funding opportunities for research, development and innovation RD&I projects.

The SET Plan represents the **key EU energy research and innovation** initiative that serves the Energy Union goals and delivers the innovations necessary for the Europe to become the first climate neutral continent by 2050. It contains a dedicated vision for each technology area and sets ambitious targets to be reached in the next decade(s) to place Europe at the forefront of the next generation of low-carbon energy technologies. For each of these technology areas, Implementation Plans have been developed that facilitate the meeting of these targets.

In order to reach the goals of placing Europe at the forefront of the low carbon energy scene, an Implementation Working Group (IWG) is created to move forward the Deep Geothermal Implementation Plan (DG-IP), endorsed by the SET Plan Steering Committee.

THE IWG ON DEEP GEOTHERMAL

In February 2017, interested Member states/Associated countries, stakeholders and the European Commission kicked off the SET Plan temporary working group (TWG) on Deep Geothermal Systems. This TWG drafted an Implementation plan that is containing concrete R&I activities, and proposed relevant funding opportunities, which are considered essential for achieving the agreed set of targets. The Implementation plan was then endorsed by the Steering Group members in January 2018.

Members of the Deep Geothermal Implementation Working Group is composed of representatives from Belgium, Cyprus, Finland, France, Germany, Iceland, Ireland, Italy, Portugal, The Netherlands, Turkey, Spain, Sweden, Switzerland, the European Commission, the European Geothermal Energy Council (EGEC), the EERA Joint Programme Geothermal Energy (JPGE) and the Deep Geothermal, Renewable Heating and Cooling and District Heating and Cooling ETIPs.



THE THREE PILARS

The growth of the European geothermal sector is supported by three pillars (Figure below). The first pillar is the geothermal industry; the second is the geothermal research community; and the third and centre pillar is the public sector. The establishment and operation of the DG-IWG is based on that three pillars structure and provides the adequate platform for a comprehensive interaction and discussion between the different stakeholder groups.

| Deep Geothermal - Implementing Working Group Initiating and follow up of general measures to promote the IP targets Annual assessment and recommendation to SETPLAN Feneral discussion fora | | |
|---|---|--|
| SETPLAN Countries + EU | National Research | National Industry |
| Initiating and follow up of member state and EU targeted funding | Initiating and follow up of research programmes | Initiating and follow up of industrial funding |
| GEOTHERMICA | EERA ET | TIP EGEC |
| | | |

IWG GOALS

The Implementation Working Group shall be the leading force behind the execution of the IP and consequently behind the acceleration of the development and deployment of geothermal energy in Europe. The IWG goals are therefore the following:

- Ensure the adequate execution of the IP by coordinating EU, national and regional public and private funds and focusing them on the Implementation Plan's R&I and non-technical priorities by bringing together European, national and regional institutions committed to funding geothermal R&D, such as the ERANET GEOTHERMICA;
- Keep the IP up to date so that it can always represent a reference document for the development of the geothermal energy sector. In 2020, a comprehensive review of the IP would update that priorities.;

- Follow the execution of the IP in cooperation with the European Commission, on the basis of the mechanisms and key performance indicators (KPIs) to be agreed within the IWG and the SET-Plan Steering Group;
- Establish the IWG as a permanent network of geothermal stakeholders by involving both the industry and the academia in the execution, regular update and monitoring of the IP. This shall be achieved primarily by including representatives of European Technology and Innovation Platforms involved in geothermal development and members of the European research community;

First achievements

• SET Plan - Declaration of intent on Strategic Targets in the context of an Initiative for Global Leadership in Deep Geothermal Energy – publication - Brussels, 14 September 2016.

By signing this declaration, the stakeholders agreed to implement ambitious targets in an endeavour to maintain the global leadership in geothermal sector, and to jointly address all relevant issues in order to fulfill these targets. <u>Link</u>

• SET-Plan Temporary Working Group Deep Geothermal Implementation Plan > January 2018

This IP on DG provides a list of research and innovation (R&I) actions that address the main challenges and issues for the development of geothermal energy resources in both ways: as heat and electricity source. <u>Link</u>

• Updated Implementation Plan: ongoing consultation > 2020 revision of the Deep Geothermal Implementation Plan.

This document presents the draft revision of the Deep Geothermal Implementation Plan (IP), that the Deep Geothermal Implementation Working Group has approved in 2020. The predecessor of this document was dated January 2018. The IWG working group that was tasked with the revision of the IP concluded that little changes were needed to make the document ready for the years to come. Link

Annual report on the RD&I activities and their impacts

The report presents the annual 2019 review of the new and ongoing RD&I projects to better understand the technological trends and the ongoing activities. Link

Invitation to join

This invitation to join is for European countries not yet in, and industry & researchers not yet involved in the execution of the implementation plan.

Any countries involved in the SET-Plan, and not initial member of the IWP, may join the IWG at any time by informing the Chairs in writing.

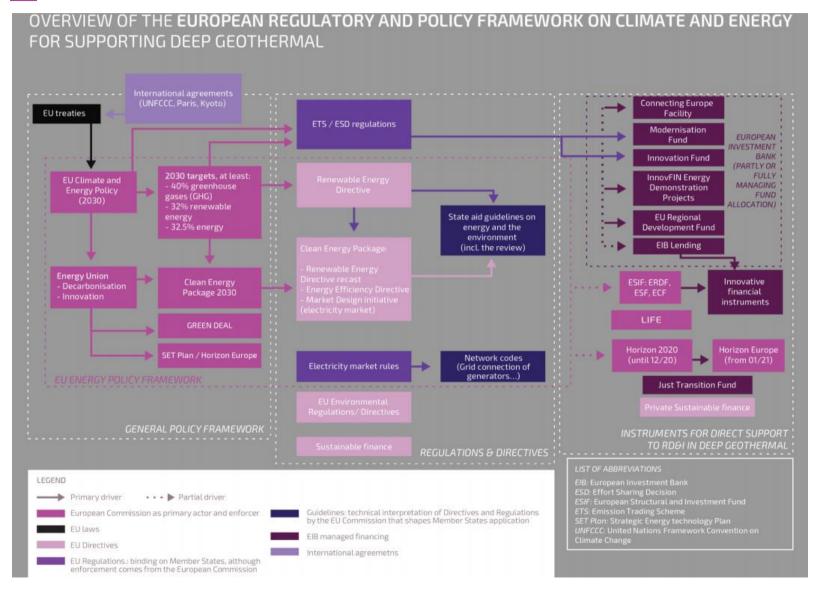
Geothermal stakeholders are invited to participate in any of the activities of the Implementation Plan. The role of stakeholder organisations in the IWG is to ensure the proper involvement of the industry and the academia in the execution of the Implementation Plan, since private funds complement national and EU funding.

Policies and funding programmes

SU IWG DG identifies the key policy areas and funding programmes that provide opportunities for geothermal energy development and financing geothermal projects.

KEY POLICY INITIATIVES:

Link



KEY EU FUNDING OPPORTUNITIES:

Pre-commercial Demonstration/ Uptake / Market readiness/ Roll Timeline development (R&D) Firs-of-a-kind out of technology Horizon 2020 Existing tools InnovFin **ESIF EFSI** LIFE (including PF4EE) **NER 300** Connecting Europe Facility (CEF) Horizon Europe

Future

EU PROGRAMMES FOR LOW-CARBON INNOVATION

Link

NATIONAL FUNDING PROGRAMMES

Innovation Fund

National and regional public investments are expected to trigger equal or higher investments by industry together with some funding administered by the European Commission (e.g. Innovation Fund or Horizon 2020 and Horizon Europe) for efforts that address pan-European themes.

Modernisation Fund

Just Transition Fund

Invest EU

It is crucial that research resources are also mobilised across Europe. R&D support from Member States and regions must be coordinated at European and national level.

GEOTHERMICA – ERA NET Cofund is coordinating these pan-European R&I activities. It is supporting transnational projects, bringing innovative geothermal energy solutions closer to commercial deployment.

The Smart Specialization Platform on geothermal energy "S3 Partnership Geothermal Energy 2.0" launched in 2019 aims to increase the interregional cooperation along shared priorities related to geothermal energy.

Point of contact

A support unit for the Deep Geothermal Implementation Working Group (DG-IWG) has been set up to achieve DG-IWG goals efficiently and productively.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement [838814-SU-DG-IWG]

https://www.deepgeothermal-iwg.eu/