

2016 European Union Report

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IEA Geothermal

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1. Introduction

In 2016 Horizon 2020, the current EU framework programme for research and innovation, continued to offer opportunities for geothermal energy research and innovation (R&I) projects. The 2016 topics are included in the 2016-17 Work Programme¹ and cover the whole range of technology development, from very low TRL (Technology Readiness Level) to market uptake. The contribution from the European Union to ongoing R&I geothermal projects in 2016 exceeded EUR 100 million.

Furthermore, in 2016 important developments took place in geothermal energy research and innovation policy, signalling the recognition that geothermal power and heat have the potential to provide real alternatives to replace fossil fuels and to greatly contribute to a low-carbon energy system.

2. Major highlights and achievements

In 2016, three new projects were funded under Horizon 2020. In particular, a coordinated call with Mexico was launched, funded by Horizon 2020 on the EU side and by CONACYT²/SENER³ on the Mexican side, with each part equally contributing EUR 10 million. The project was generated by shared European and Mexican research interests and in the framework of an existing bilateral Agreement on Science and Technology between the European Union and the United States of Mexico. The presence of geothermal fields in Mexico with challenging characteristics as well as the presence of supercritical fluid of high temperature and acidity (SHGS) and fields with low rates of permeability and at the same time high temperatures (EGS), offer the possibility of developing technologies that reduce the risk of extraction and exploitation of geothermal resources. The GEMex project, Cooperation in Geothermal energy research Europe - Mexico for development of Enhanced Geothermal Systems and Superhot Geothermal Systems, was selected and it is being implemented by two complementary consortia: a European consortium and a corresponding consortium from Mexico.

The second project funded in 2016 is a co-fund ERA NET project that originates from the good cooperation among countries participating in the Geothermal ERA NET project, that was concluded in 2016, and in the interest of old and new countries to join efforts in funding R&I. The project is called GEOTHERMICA⁴ and in April 2017 it will launch a call for joint innovative demonstration and technology development projects to accelerate deployment of geothermal energy. The financial commitment of the participating countries is topped-up with more than EUR 8 million from Horizon 2020 and the total budget for the call is about EUR 32 million. The selected projects are expected to deliver results by 2021.

In addition, in 2016 a research project on advanced materials and processes to improve performance and cost-efficiency of shallow geothermal systems and underground thermal storage was selected for funding under Horizon 2020. This project will start in 2017.

The ongoing EU-funded projects continued work in 2016 and a number of them were presented in September in Strasbourg at the European Geothermal Congress (EGC2016).

The year 2016 marked a milestone for geothermal energy in the development of technology policy. Within the framework of the SET Plan, the European Strategic Energy Technology Plan, which aims at accelerating the development and deployment of low-carbon technologies⁵, a

European Technology and Innovation Platform (ETIP) on Deep Geothermal Energy⁶ was created. This ETIP complements the ETIP on Heating and Cooling and joins the other existing thematic ETIPs on renewable energy technologies. ETIPs have an important role as they support the implementation of the SET Plan by bringing together EU countries, industry, and researchers.

The ETIP on Deep Geothermal, together with other stakeholders, had the opportunity to comment and to contribute to the preparation of a Declaration of Intent⁷ that sets strategic targets to reduce the cost of geothermal energy technologies and to make them more efficient. The Declaration of Intent was endorsed in September 2016 by the SET Plan Steering Group, the SET Plan decision-making body.

3. References and Links

1 http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-energy_en.pdf

2 Consejo Nacional de Ciencia y Tecnología

3 Secretaría de Energía

4 <http://www.geothermica.eu/>

5 <https://setis.ec.europa.eu/>

6 <http://www.geoelec.eu/etip-dg/>

7 https://setis.ec.europa.eu/system/files/integrated_set-plan/declaration_of_intent_geoth_0.pdf



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