

## Tenth session of the IRENA Assembly

### Thematic meeting

12 January 2020, 13:15 – 14:30

St. Regis Hotel, Saadiyat Island, Abu Dhabi

## **Global Geothermal Alliance Enabling Frameworks for Accelerated Geothermal Energy Development**

### *Background*

Geothermal energy represents an abundant, competitive and predictable renewable energy source in several areas for power generation, and even more widely for direct use applications through low and medium temperature resources. In particular, geothermal heating applications can provide affordable heat, boost local development in the areas near the resource location, dramatically contribute to improve air quality in cities and decarbonise the heating sector.

Yet, geothermal energy remains underdeveloped; the installed capacity worldwide amounts to about 14 GW for power generation and 70 GW for heating. A broader adoption of all geothermal energy applications has been hampered by a variety of barriers, including high upfront investment cost, resource risks, inadequate policy and regulatory frameworks, and knowledge gaps among policy-makers and investors.

The Global Geothermal Alliance (GGA), coordinated and facilitated by IRENA, serves as a global platform for enhancing dialogue, cooperation and coordinated action among governments, industry, intergovernmental organisations, financial institutions, and academia. Today, its constituency stands at 46 member-countries and 39 partner institutions.

To improve the way information on geothermal resource potential is communicated to potential investors, IRENA, the International Geothermal Association (IGA), and the World Bank's Energy Sector Management Assistance Programme (ESMAP) teamed up and trained more than 100 high-level stakeholders and geothermal practitioners on the specifications for the application of the *United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009)* to geothermal energy resources. Implemented under the GGA umbrella, the joint project also piloted the application of the standard in selected fields in Eastern Caribbean islands, Ethiopia, and Indonesia.

IRENA is finalising a regional analysis of the market status in Eastern Africa, which provides an up-to-date analysis of the market development for both geothermal electricity and direct use, and covers aspects such as business models, financing, and policy and regulatory frameworks. It will identify bottlenecks and inform policy-makers and other stakeholders on possible options to accelerate the deployment of geothermal energy in the region.

The GGA has also expanded its activities to increase knowledge on and support for mainstreaming geothermal heating with a focus on agri-food and district heating and cooling applications in cities. The outcomes of the GGA conference on geothermal direct utilisation and food security co-organised in 2018 by the Ministry for Foreign Affairs of Iceland, the Iceland Geothermal Cluster Initiative and IRENA, formed the basis of dissemination of key lessons, best practices and enhanced dialogue at regional level on how to accelerate the development of geothermal applications in the food and agricultural sector. The main recommendations from this process were presented in IRENA's report [Accelerating geothermal heat adoption in the agri-food sector: Key lessons and recommendations](#).

As part of the project *Energy Solutions for Cities of the Future*, IRENA is working to improve knowledge and to support the scale up of low-temperature renewable heat sources in district heating and cooling. In this context, an advisory group of expert practitioners from members and partners of the Alliance, established in September 2019, is supporting the development of guidelines for policy-makers to provide insights on options and tools to develop new low-temperature networks or retrofit old and inefficient systems, thereby facilitating the integration of low temperature resources such as geothermal energy.

### ***Objectives***

The thematic meeting will provide updates on the work undertaken under the GGA and the latest geothermal activities undertaken by members and partners.

The meeting will also give participants the opportunity to share challenges and experiences and present proposals for joint activities supporting geothermal energy development at national and regional levels.

### ***Guiding Questions***

- What are the key challenges that need to be addressed to make geothermal energy play a more prominent role in the global energy transformation?
- How is your country/region addressing the need to decarbonise the heating and cooling sector in cities, including through geothermal energy? What are the key challenges and success stories?
- How can members and partners of the Global Geothermal Alliance further support the accelerated deployment of geothermal energy worldwide?

### ***Associated Publications***

- [Accelerating Geothermal Heat Adoption in the Agri-food Sector: Key lessons and Recommendations](#) (2019)
- [Geothermal Power: Technology Brief](#) (2017)

### **For more information please contact:**

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