

Twelfth session of the IRENA Assembly

High-Level Meeting Global Geothermal Alliance: Geothermal for Energy Transition, Sustainable Development and Climate Action

14 January 2022, 09:30 – 11:00, Room A2
St. Regis Hotel, Saadiyat Island, Abu Dhabi

Background

Geothermal energy is a key component in energy transition and climate action towards more climate-resilient world. It is the only renewable source capable of providing reliable baseload, high-capacity factor, economic value, cost-effectiveness and flexible electricity, heating and cooling, and other direct applications. It is reliable, sustainable and climate resilient. Recently, geothermal energy has also proved its viability for new technologies like the production of green hydrogen, where its high-capacity factor plays a significant part in influencing the hydrogen market. Additionally, geothermal power plants are resilient in extreme climate events such as hurricanes, floods, dry spells, and snow blizzards maintaining reliable energy supply to meet the power demand.

Geothermal is a source of energy for direct heating and cooling. Applications in the heating and cooling of buildings, process heating in industrial applications as well as in the agri-food sector make geothermal a viable option for the decarbonisation of the end-use sectors, in addition to contributing to the achievement of multiple Sustainable Development Goals. Furthermore, ongoing efforts to extract critical minerals such as Lithium from geothermal brines are set to increase the contribution of geothermal resources in the energy transition.

It is estimated that geothermal resources have the potential to contribute approximately 18% of the global energy needs. However, the actual share of geothermal in the global energy mix remains relatively low. International cooperation is required to address the challenges hindering accelerated geothermal development, including limited awareness of the benefits of its utilisation, among others.

Therefore, under the Global Geothermal Alliance (GGA) umbrella, IRENA, in collaboration with GGA members and partners, is disseminating these benefits of geothermal energy, informing the real value towards energy transition and climate action. Hence, creating a business environment that recognises the particularities and benefits of this technology and allowing to take advantage of opportunities that can be generated by geothermal energy in the climate action context.

In the framework of the twelfth session of the IRENA Assembly, GGA will organise a high-level meeting of the Alliance. The high-level meeting will focus on the benefits and opportunities for geothermal energy and its increasing role to contribute to the energy transition, climate change mitigation and climate adaptation.

Objectives

This high-level meeting will convene GGA member countries and partner organisations to discuss the crucial role of geothermal energy in the energy transition and its relevant contribution to climate action offering a high-level platform for an exchange on challenges and opportunities in the deployment of geothermal solutions in developing countries. The high-level meeting aims to bring together a range of perspectives on this critical global development priority.

With a greater relevance of extreme climate events, speakers from the GGA constituency are invited to share their experiences and best practices and explore modalities to enhance the dialogue among key stakeholders at international and local levels to scale up action on the ground for the promotion of geothermal energy solutions for power generation and heat use.

The high-level meeting will act as a call to action to prioritise the deployment of geothermal, while also highlighting IRENA's ongoing work in this context. The session will explore the current landscape of international cooperation on this issue and identify pathways to accelerate geothermal development. The session will also gather comments from GGA members and partners on modalities to enhance cooperation under the umbrella of the platform.

Guiding Questions

- How can the Global Geothermal Alliance further support the accelerated deployment of geothermal energy worldwide for power generation and direct uses?
- What role can policymakers and development partners play to ensure that national efforts to increase the share of geothermal energy in the energy mix are prioritised?
- What are the needs in terms of international cooperation to increase resource mobilisation for geothermal energy? How can the involvement of the private sector be enhanced?
- How can the use of geothermal to generate green hydrogen be mainstreamed?

Associated Publications

- [Geothermal: The Solution Underneath](#) (2021)

For more information please contact:

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