

## Geothermal Resources of Saudi Arabia: An Update

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**Abstract :** Saudi Arabia vision of 2030 calls for the diversification of energy sources in the Kingdom. Accordingly, Saudi Arabia has launched a promising plan aims to gradually power the major industrial activities in country by renewable and low carbon energy sources. The geothermal sources are among the promising renewable sources that can support the achievement of the country vision and energy mix plan. Saudi Arabia is enriched with several geothermal resources especially in the western and southwestern regions along the Red Sea region. This paper will give an overview on the different geothermal resources (Hydrothermal, Harrats volcanic eruptions and hot dry rocks) of Saudi Arabia, their categories and classifications as well as the different exploration (Geophysical, geological, geochemical, etc) and drilling enhanced during the last few decades. The economic viability and the possible contribution of geothermal resources in the future of renewable energy of Saudi Arabia is discussed. Some case studies from Jizan, Al-Lith, Harrats and Midyan areas are demonstrated. Scenarios of different low and high geothermal applications for possible power generations, as well as other low-grade utilizations, e.g. direct use, district heating & cooling, medical therapy, etc., are presented.

**Keywords :** KSA vision 2030, energy mix, geothermal resources, applications, Saudi Arabia

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