Older Oilfields as Distributed Geothermal Energy Resources

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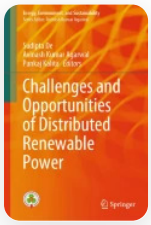

Challenges and Opportunities of Distributed Renewable Power

Subha Mondal & Chitta Sahana

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Abstract

The global share of renewable energy uses is to be increased to reduce the carbon footprint. Geothermal-based renewable resources are preferred for satisfying localized energy needs due to their steady and uninterrupted supply. However, geothermal-based energy systems are cost-intensive unless the geothermal heat is readily available. Many of the oilfields produce hot geothermal water at the stage of high water cut. Removing a larger amount of water produced at the high water cut stage of an oilfield is a compulsion. Thus, the hot water produced from the oilfield at the high water cut stage can be used to satisfy the localized energy needs fully or partially. On the other hand, many of the researchers proposed to recover geothermal heat from depleted oilfields. Recovering geothermal heat from depleted oil reservoirs would be an attractive