

Roadmap and breakthroughs for super-critical geothermal power generation

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A team of Japanese geothermal researchers have been investigating a feasibility of commercial geothermal power generation using subduction-origin high temperature resources which is estimated to be super-critical conditions. The potential of the super-critical geothermal resources in Japan can reach to around one TW, and it can cover almost all the baseload electricity demand with drastically reducing emission of CO₂. Although there must be a number of scientific and engineering breakthroughs to establish super-critical geothermal power generation, the team has drew a roadmap after identification of key scientific and technological breakthroughs for power generation in 2050. The authors will describe principles and roadmap of the supercritical geothermal power generation in Japan in the presentation.

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