

Geothermal

Geothermal energy relies on utilising underground heat energy to generate electricity. Geothermal energy comes from the earth's extremely hot molten core as well as from the decay of radioactive elements. Geothermal energy is globally recognised as being divided into three categories; high temperature resources ($>150^{\circ}\text{C}$), mid temperature resources ($90^{\circ}\text{C}-150^{\circ}\text{C}$) and low temperature resources ($<90^{\circ}\text{C}$). Of these, low temperature geothermal resources are generally used for direct-use applications (not for generating electricity), and high temperature geothermal resources are the best suited to geothermal electricity generation. China's high temperature geothermal resources are relatively plentiful, predominately

situated in the southern part of Tibet, the western part of Sichuan, the western part of Yunnan; all of which are part of the Himalayan tropics.

Trajectory 1

China's exploration into geothermal energy makes slow progress, and geothermal electricity generation costs are relatively high. China's installed geothermal electricity capacity is 2.8 MW.

Trajectory 2

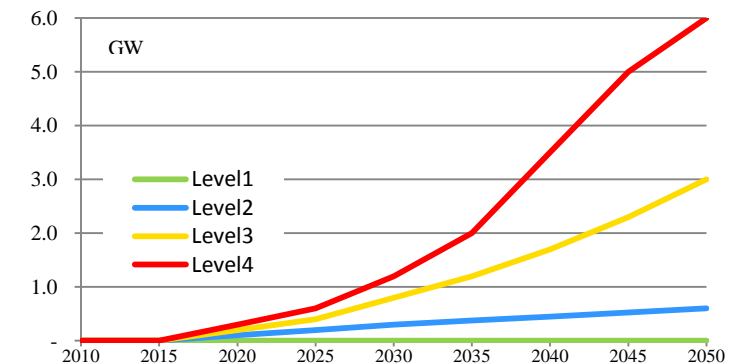
China's energy strategy sets out a goal that in 2020 geothermal energy stations should have a capacity of 100,000 kilowatts, by 2030 this should be 300 MW and by 2050 capacity should reach 600 MW.

Trajectory 3

China's geothermal exploration and development makes significant progress, in 2020 geothermal power stations are constructed with a capacity of 200 MW, by 2030 this has reached 800, and after this there is rapid geothermal development until in 2050 it reaches 3 GW, at which point China's high temperature geothermal resources will be completely developed.

Trajectory 4

Policy promoting the development of geothermal energy resources is put in place. In 2020, capacity reaches 300 MW, by 2030 this has reached 1.2 GW and by 2050 geothermal electricity generation is completely developed with an installed capacity of 6 GW.



China's geothermal resource capacity