

CCS power generation

CCS (carbon capture and storage) technology captures high density carbon dioxide and then either stores it underground or at the bottom of the ocean to decrease greenhouse gas emissions. CCS faces challenges, both economically and in terms of safety, and as such the future of CCS development is uncertain.

Trajectory 1

In this scenario, the cost of CCS remains high, and there is no demand for large-scale application of the technology, China's energy industry does not adopt CCS technology.

Trajectory 2

In this scenario, CCS technology is late to develop and only by around 2040 does it start to be used, however the costs associated with CCS

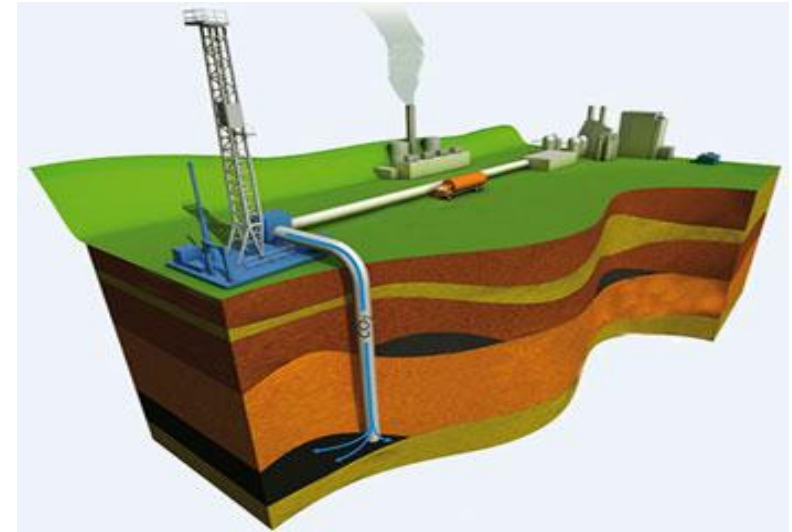
technology are still relatively high. In 2040, the thermal energy industry captures 2% of carbon emissions, and by 2050 this reaches 10%

Trajectory 3

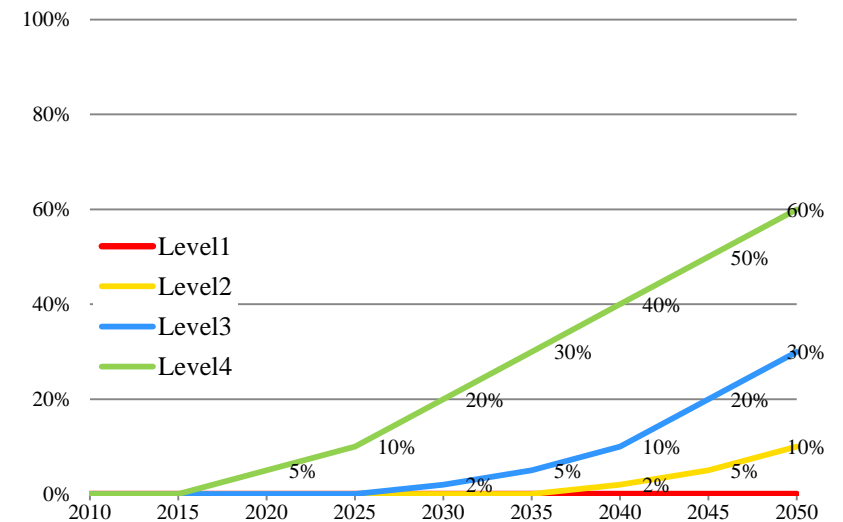
In this scenario, CCS technology develops at a moderate pace, and is put into operation in 2030 with the cost of CCS lowering to the extent that it is economically viable. In 2030, energy industry captures 2% of emissions, rising to 10% in 2040 and then 30% in 2050.

Trajectory 4

In this scenario, CCS technology develops relatively quickly, and in 2020 it begins to be utilised commercially. At the same time, carbon taxes rapidly decrease the cost of using CCS technology. CCS begins to be used on a wide scale, and in 2020 the energy industry captures 5% of emissions, rising to 20% in 2030 and then 60% in 2050.



CCS device



Carbon capture proportion in power station