PV Solar

China is the world's leading manufacturer of PV solar cells, but, owing to the relatively high cost of photovoltaic electricity generation, the usage of PV solar energy generation is extremely limited in China. In 2009, PV solar energy capacity was 25,000 kilowatts and in 2010 this rapidly grew to reach 245,000 kilowatts.

Trajectory 1

In this scenario, solar energy electricity generation costs are high and not competitive in comparison with other forms of electricity generation. Furthermore, China's solar electricity resources are situated in China's northwest, and the issue of transporting solar energy electricity has not yet been effectively resolved. In 2020, PV solar electricity generation capacity is at 2 million kilowatts, by 2030 it reaches 5 million kilowatts and by 2050 it reaches 10 million kilowatts, representing a 41 fold increase on 2010's capacity.

Trajectory 2

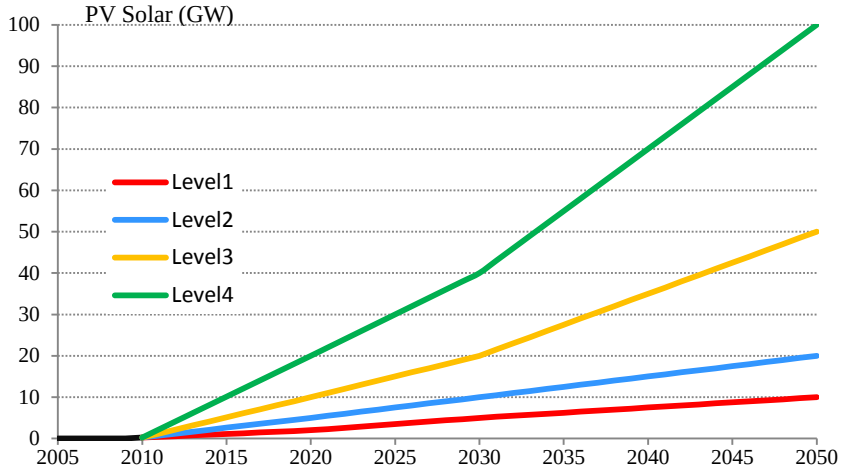
In this scenario, China's PV solar energy gradually develops, and in 2020 China's PV solar electricity generation capacity reaches 5 million kilowatts. By 2030, it rises to 10 million kilowatts and in 2050 it reaches 20 million kilowatts.

Trajectory 3

In this scenario, the cost of manufacturing of PV solar energy progressively becomes more competitive, and policy is very supportive. As such, PV solar energy enters into a stage of rapid development, reaching electricity generation capacity of 10 million kilowatts in 2020, 20 million kilowatts in 2030 and 50 million kilowatts in 2050, representing a 204 fold increase on 2010's capacity.

Trajectory 4

In this scenario, the introduction of carbon taxes makes PV solar energy more competitive, and energy storing technologies and electrical grids improve. As such, PV solar energy begins to be used on a wide-scale, with capacity at 20 million kilowatts in 2020, 40 million kilowatts in 2030 and reaching 100 million kilowatts in 2050.



Solar energy capacity