Nuclear Power

The total nuclear power generation capacity in the country is 6.8 GW in 2017. This includes seven nuclear power stations which are located in the states of Tamil Nadu, Maharashtra, Rajasthan, Karnataka, Gujarat and Uttar Pradesh. These seven plants are maintained and operated by Nuclear Power Corporation of India Limited (NPCIL), which is government owned enterprise. In 2017, Tamil Nadu has four units with a cumulative capacity of 2.4 GW (M.A.P.P. and Kundankulam). NPCIL is planning four indigenous reactors of 1 GW MW each at Kundankulam and 0.5 GW Bhavini Fast Breeder Reactor (FBR) plant is expected to commission in coming years.

Level 1

Level 1 assumes that Kundankulam unit 3 and 4 will be commissioned during 2030-35 and units 5 and 6 during 2045-50 because of public sentiment regarding nuclear power and issues related to land acquisition and environment concerns.

Level 2

Level 2 assumes that units 3,4,5 and 6 at Kundankulam and one unit at Kalpakkam units will commission in the period 2025-2045. This could be because public sentiment regarding nuclear power continues and changes over a long period of time and total capacity rise to 6.9 GW. Total generation from nuclear power plants will be 48.7 TWh in 2050.

Level 3

Level 3 assumes that units 3,4,5 and 6 at Kundankulam and both units at Kalpakkam gets commission in the period 2025- 2040. This could be because of improved government efforts which improves public sentiments on nuclear power early. Total generation from nuclear power stations will be 52.2 TWh in 2050 corresponding to 7.4 GW installed capacity.

Level 4

In this scenario, it is assumed that challenges related to commissioning of nuclear plants are overcome and new plants with FBR technology are commissioned. Total generation from nuclear power plants will reach 59.2 TWh in 2050 corresponding to 8.4 GW installed capacity.