

Large Hydro Power Plant

The total installed capacity of large hydro power plants in the state was around 1.7 GW in 2015, which includes, Hampi, Lower Sileru, Machkund, Nagarjun Sagar (and extension), Srisaillam, T B Dam and Upper Sileru-I and II. Another 50 MW Nagarjun Sagar Tail Pond has been recently added. As per the Central Electricity Authority (CEA), total hydro power generation potential in the state is around 2.7 GW of which around 65% has already been exploited. The state also has planned for setting-up Polavaram hydro plant (12 X 80 MW) which will be an interstate project. This lever provides choices of selecting different growth scenarios for large hydro power plants in the state.

Level 2

Level 2 assumes that the installed capacity will reach its full potential of 2.7 GW by 2035 and generation will increase from 2.8 TWh in 2015 to 5.9 TWh in 2050. This could be because issues related to ecological damage, resettlement and rehabilitation might get resolved over a long period of time.

Level 1

Level 1 is a pessimistic scenario, in which it is assumed that only current plants continue to operate with scheduled maintenance efforts and no new hydro plant is built. This could be due to issues of large-scale ecological damage, resettlement and rehabilitation. The electricity generated in 2050 would increase marginally from 2.8 TWh in 2015 to 3.8 TWh in 2050.

Level 3

Level 3 assumes that total installed capacity will reach full potential by 2030. Electricity generation will reach 5 TWh by 2030 and thereafter improves marginally to 5.9 TWh by 2050. This could be because government efforts might result in improvement in public sentiments and key issues related to hydro power development might get resolved. The sector could also benefit from completion of Renovation & Modernization (R&M) and Life Extension (LE) efforts.

Level 4

Level 4 is the most aggressive scenario which assumes that there might not be any constraints for development of hydro plants. The Polavaram plant will be commissioned in phased manner by 2025 (as per state plan). Hydro capacity will remain constant till 2050. Electricity generation will reach 4.9 TWh by 2025 and thereafter improves marginally to 5.9 TWh by 2050.

