SMALL HYDROELECTRIC POWER STATIONS (SHP)

With a capacity of 3686 MW of Small Hydro Power installed in the country as of 30th June, 2013, it constitutes nearly 14% of installed RE capacity. While SHP is already cost competitive with conventional power, increased efficiencies and CUFs would make it even more viable in the future. In order to further enhance the total power generation from SHPs it is essential to harness all potential sites. According to the MNRE, the focus of the SHP program is to lower the cost of equipment, increase its reliability and set up projects in areas which give the maximum advantage in terms of capacity utilization. This resource is more widespread then wind and solar in many cases, especially as run of the river projects, and also has a higher CUF. It could easily grow given reasonable Feed in tariffs by the Regulators. The growth if this source is also imperative for balancing/peaking power requirement.

Level 1

Level 1 assumes that although SHP is a low cost RE resource, capacity addition is lower than expected in the 12/13th plan periods reaching only 6.5 GW by 2022. It further increases to 7.5 GW by 2027 and plateaus at 9 GW from about 2032-2047. Essentially capacity addition is very slow and only takes care of retirement, to maintain just the committed capacity up to the 13th Plan. Environmental and social concerns impact the development of SHPs , especially the storage projects, especially in the light of recent floods in North India.

Level 2

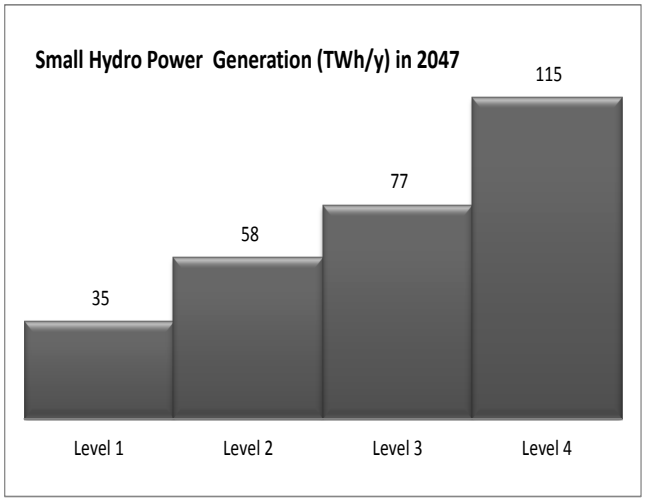
Level 2 assumes that the 12th Plan target of 2100 MW is met by 2017 and a further 3500 MW is added in the 13th Plan to reach a cumulative capacity of 8.9 GW by 2022. Capacity addition slows down after this point and reaches the ultimate capacity of 15 GW 2047.

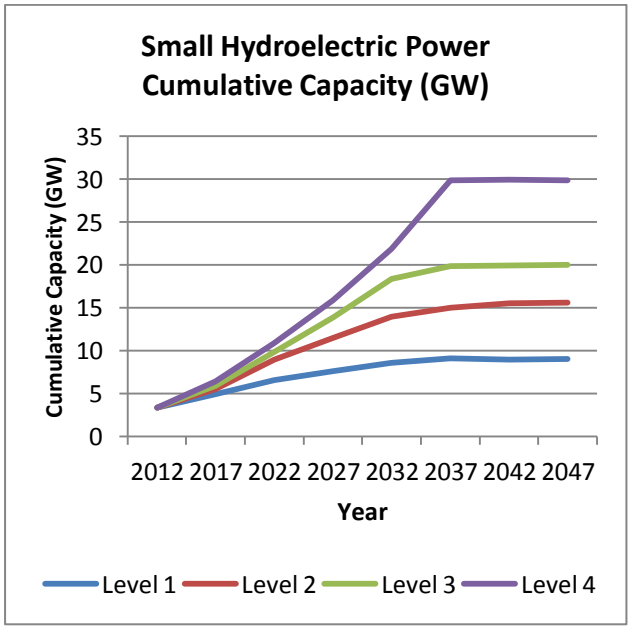
Level 3

Level 3 assumes an optimistic view by meeting not only the 12th and 13th Plan targets, but a slightly faster deployment resulting in 9.8 GW in 2022. By 2032, the complete present projected potential of roughly 20 GW is met and maintained thereafter till 2047. Resultant generation is approximately 80 TWh

Level 4

Level 4 assumes the resource potential is significantly augmented and capacity deployment increases rapidly. It reaches 10.8 GW in 2022, in line with NAPCC expectations and further increases to 29.9 GW by 2047. Both these efforts and enhanced capacity utilization lead to a quick increase in overall SHP generation resulting in 115 TWh by 2047.





Note: Please see detailed documentation for references.