# Electrical Energy Storage

With increasing capacity of renewable energy based power generation, importance of grid connected energy storage systems are becoming important. Energy storage system would be required for balancing intermittent generation from renewable energy based power plants. This lever analyzes scenarios of exploitation of the available storage capacity. User can select different level of electrical energy storage addition, under different demand/supply conditions.

### Level 4
Solar and wind energy based generation capacity increases to 102 GW by 2050. New micro grids will be implemented not only in rural areas but also in urban centers to ensure continuous and sustainable electricity supply even during natural calamities. Total grid connected storage in the state will reach up to 8 GW by 2030, 12 GW by 2040 and then increases to 20 GW by 2050.

### Level 3
Solar and wind energy based generation capacity increases to 90 GW by 2050. Further, new technologies will emerge as low cost storage options. Hybrid plants will use new battery and compressed storage technologies. Total grid connected storage in the state will reach up to 5.8 GW by 2030, 10 GW by 2040 and then increases to 15 GW by 2050.

### Level 2
Solar and wind energy based generation capacity increases to 64 GW by 2050. Electric vehicles will be used as grid connected storage option. Various storage technologies will be deployed to manage intermittency in generation from renewable energy sources. Though storage market will be developed significantly but at slower pace. Total grid connected storage in the state will reach up to 4.4 GW by 2030, 7 GW by 2040 and then increases to 12 GW by 2050.

### Level 1
Solar and wind energy based capacity increases from around 2 GW in 2015 to 41 GW in 2050. Cost of batteries remain as a major barrier and thus, installation of grid connected battery storage is slow. Total grid connected storage in the state will reach up to 0.5 GW by 2030, 1.3 GW by 2040 and then increases to 4 GW by 2050.