

Large Hydropower stations

As at 2010 Nigeria had 1.94 GW capacity of large-scale hydropower with available capacity of 1.23 GW which generated about 6.46TWh. Large-scale hydroelectricity generated 29.64% of the total electricity generation by the national electricity grid.

Level 1

Level 1 assumes that the total hydropower capacity is maintained at the 2010 level of 1.94 GW by rehabilitating the hydropower plants to operate at full capacity. This will generate approximately 9.98TWh of electricity at 60% capacitor factor.

Level 2

Level 2 assumes that the hydropower capacity reaches 5.24 GW by 2030 through rehabilitating the existing hydropower to operate at full capacity and adding 3.3 GW large hydro power stations. The capacity will remain constant up to 2050. This will generate approximately 27.54TWh of electricity at 60% capacity factor.

Level 3

Level 3 assumes the total hydropower capacity reaches 6.99 GW by 2035 by deploying 3.3 GW of large hydropower capacity. This capacity represents 47% of the country's hydropower potentials. The capacity will generate about 43.31TWh of electricity. Implementing level 3 requires a strong commitment in terms of financing, planning and construction.

Level 4

Level 4 assumes the hydropower capacity reaches 15 GW by 2050, through utilising all the country's hydropower potentials. This capacity can generate 59.13TWh of electricity. This can be achieved through public private partnership (PPP) due to high investment cost that is required in the implementation



Shiroro Hydro Electric Power Plant, Nigeria

