

Nuclear Power Stations

The Uranium or Nuclear fuel in Nigeria is not yet quantified. Though there is no nuclear power station in the Nigeria, it is part of the plan for sustainable electricity generation mix.

Level 1

Level 1 assumes that nuclear power station will not be available in the electricity generation mix by 2050.

Level 2

Level 2 assumes that nuclear power station of 1 GW should become available by 2023 and another capacity of 4.0 GW should come online by 2030 which makes cumulative capacity of 5.0 GW available by 2035 and remain constant up to 2050. This will generate approximately 35,040 GWh of electricity at 80% capacity factor.

Level 3

Level 3 assumes that nuclear power stations of 7.2 GW should become available by 2030 and remains constant up to 2050. That is 1.0 GW Nuclear power should be introduced by 2023. Another plant of 6.2 GW is to become available by 2030. This will generate approximately 50,457GWh of electricity. Implementing level 3 requires a strong commitment in terms of financing, planning and construction.

Level 4

Level 4 assumes that nuclear power station of 1.0 GW should become available by 2023. It is assumed that capacity addition grows at the rate of 14% per annum through to 2050 similar to the build rate for Japan. Hence, capacity is increased to 10.52 GW by 2040 the overall cumulative capacity of 40.0 GW is achieved by 2050. This will generate approximately 280,320GWh of electricity. This can be achieved through government's strong commitment and diplomacy to convince the world that the nuclear system is mainly for power generation purpose.



Nuclear Power Plant: Courtesy Penn Energy

