Natural Gas Power Stations

Installed capacity of natural gas power plants in 2010 was 6.5GW with 2.9GW available and produced 17.604TWh at an average load factor of 0.23, mainly due to constraints in natural gas supply and aging of some units.

Level 1

Assumes that the capacity of 2010 level should operate at full capacity by rehabilitating the power plants and no more power plants are introduced up to 2050. This should produce 39.86TWh at 70% load factor.

Level 2

Assumes that the capacity of 2010 level should operate at full capacity by rehabilitating the power plants and an additional capacity of 4.86GW should be available by 2020 making a total of 11.3GW and increase to 35.3GW by 2050 at 70% load factor. This should produce 216.46TWh.

Level 3

Level 3 assumes total natural gas power plants of 16.3GW should be available by 2020 and another capacity of 1.25GW should be added by 2025. By 2050 a capacity of 62.2GW through independent Power Producer (IPPs) should be achieved which should produce 381.41TWh.

Level 4

Government's Gas Revolution Programme is fully operational and gas is not a constraint. Assumes natural gas power plants capacity reaches 80.20GW by 2050 which should produce 491.79TWh. This target is based on "energy requirement for vision 20:2020 and beyond" for Nigeria.

Geregu Power Plant (gas), Nigeria