STUDY OF THE IMPACTS OF POWER ELECTRONIC LOADS IN A GRID CONNECTED HYBRID POWER SYSTEM

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ABSTRACT

The electrical power system of an institutional building always exhibit an amount of load related disturbances. The power system of our college starts with a transformer, capacitor banks, transmission lines and substation. Our project team is assigned with the study of the effects of power electronic loads in the power system of divisional blocks A and B of Amaljyothi Engineering College, Koovapally. The main intention of the case study is the problem identification and solving related with the UPS loads. For that, the number of connected loads and extra loads are to be listed out using the single line power system diagram of the blocks. The connected loads from the VDB (vertical distribution board) and each phase to the blocks is to be checked and any unbalance in the loads are summarized. A study regarding the UPS is to be done about its basic working, surge capacity, protection circuits and main faults. The supply from the power house, input of VDB and the UPS system is simultaneously recorded under various conditions of power supply and load pattern for one day using different power analysers. The recorded informations are studied.