Tittle: Modelling and Simulation of 51-bus System using OpenModelica and OpenIPSL

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Abstract:

The 51 bus test system shall be used to study the voltage stability at different buses under different operating conditions. The simulation to be developed in OpenModelica OpenIPSL will represent a three phase fault in the power system and the response of the power system under this condition. The system consists of 12 generators which are connected to the buses through transformers. The field voltage to the generator can be changed by changing the reference voltage in Automatic Voltage Regulator (AVR) and the voltage stability will be analysed. The system has a base power of 100 MVA. The variation of the voltage in the power system during switching condition will also be analysed.