Tittle: Modelling and simulation of IEEE 118 bus system using OpenModelica and Open IPSL

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The IEEE 118 bus system consists of 54 synchronous machines out of which 20 are synchronous compensators which is used only for reactive power compensation and 91 constant loads. The power system has a base of 100 MVA. The purpose of the proposed model is to simulate the IEEE 118 bus system in OpenModelica using Open IPSL library and to know the voltage stability of the system during the following conditions.

1. Introducing a balanced three phase line to ground fault in any one of the buses.
2. Introducing a disturbance to the generator by changing the field voltage given to the Automatic voltage regulator.
3. During a generator / line outage in the power system.