

SMES with two quadrant chopper control plays an important role in real power exchange. SSSC with and without has been developed to improve transient stability performance of the power system. It is inferred from the results that the SSSC with SMES is very efficient in transient stability

enhancement and effective in damping power oscillations and to maintain power flow through transmission lines after the disturbances.

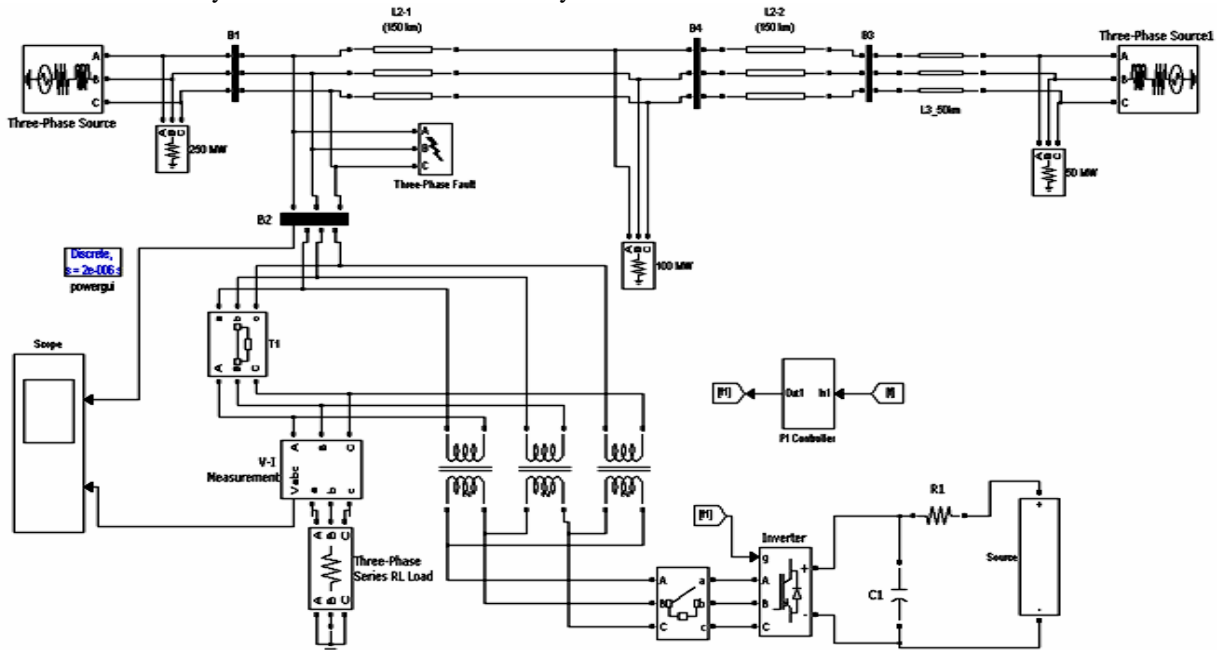


Figure 4.1: Simulation for SMES Power Flow control

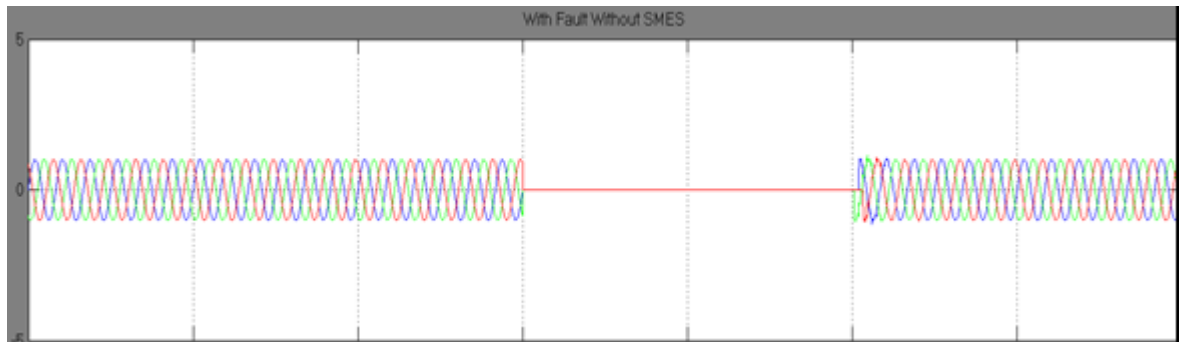


Figure 4.2: Simulation of Fault without SMES

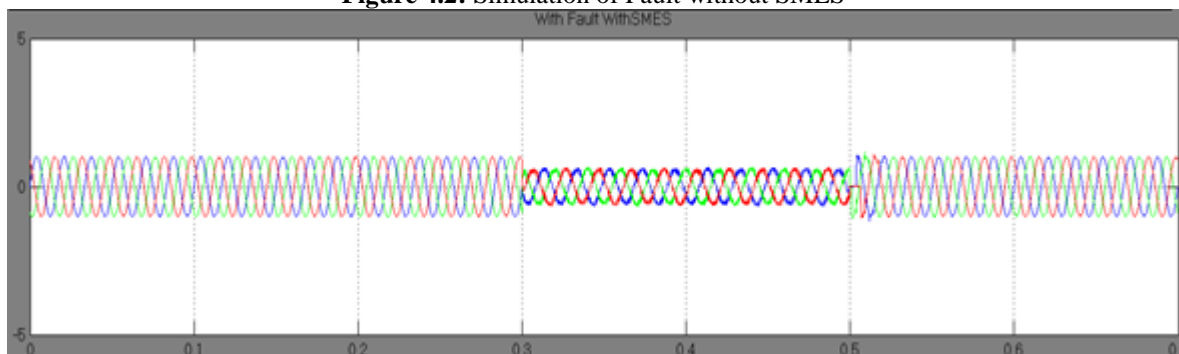


Figure 4.3: Simulation of Fault with SMES

5. Conclusion

The availability of electric power with high quality is crucial for the running of the modern society. If some sectors are satisfied with the quality of the power provided by utilities, some others are more demanding. To avoid the huge losses related to PQ problems, the most demanding consumers must take action to prevent the problems. Among the various measures, selection of less sensitive equipment can play an

important role. When even the most robust equipment is affected, then other measures must be taken, such as installation of restoring technologies, distributed generation or an interface device to prevent PQ problems. The dynamic performance of the SSSC with and without SMES for the test system are analysed with Matlab/simulink. In this SMES is used to maintain the power flow and to reduce the system damping. Also various FACTS controllers like Static Var Compensator (SVC), Static Synchronous Compensator

(STATCOM), Unified Power Flow Controller (UPFC) etc., also to be incorporated likely.

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