









## 7. Conclusion

A comprehensive analysis of the impact of TCSC on the protection of transmission lines during system disturbances is presented. The results indicate that TCSC dynamics have a significant impact on the power system protection and its transition from a mode to another can create serious problems for the conventional relays like forward overreach, reverse overreach, miss coordination in primary and back-up protection, directional malfunction and adverse effect on distance schemes. As shown in this paper, in the presence of TCSC the relay coordination encounters problems. A novel method is presented to minimize the over reach problem using FCL. However, this method does not have any effect on under reach problem of distance protection due to TCSC.

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