

Abstract

Electric power system is called reliable if the system is able to provide power supply without interrupted. However, in large systems changing on the system or disturbance may affect the power supply. Critical clearing time is the time for deciding the system is a stable or an unstable condition. Critical clearing time has also relationship with setting relay protection to keep the system in the stable condition. Prediction of critical real time for online assessment is expected to be used for preventive action system. That's why critical clearing time still an interesting topic to be investigated. This paper calculating time of Extreme Learning Machine to predict critical clearing time on system. Before predicted by Extreme Learning Machine, critical clearing time calculated using numerical calculation critical trajectory method with load changing and different fault occurring. Tested by Java-Bali 500 kv 54 machine 25 bus give result that Extreme learning machine is able to perform faster prediction of neural network.

Keywords: Critical Clearing Time, Neural Network, Extreme Learning Machine.