

CONTINGENCY ANALYSIS OF 15 BUS-BAR SYSTEMS – CONVENTIONAL AND ARTIFICIAL NEURAL NETWORK

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ABSTRACT

The purpose of this thesis is to provide security for 15 bus bar systems. Any disturbance (line trip) that may occur will be studied in Contingency Analysis. The conventional method, Fast Decoupled Load Flow program is used to provide data from the system.

These data is set as input to Artificial Neural Network, with particular reference to the Back-Propagation Network and Modular Neural Network. The result from Fast Decoupled Load Flow and Artificial Neural Network outputs is then compared.

From the result, it reveals that Artificial Neural Network can be a helping tool for Contingency Analysis. Back Propagation Network can be used to predict power flow of the system with better accuracy compared to Modular Neural Network.

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