Determination of Power Flow and Loss Allocation Using Superposition Theory Method

Abstract

This paper discussed a method to determine power flow and loss from individual generator to particular load and line flows for transmission open access. Based on solved load flow, the method uses basic circuit theories including equivalent impedance, equivalent current injection and superposition theory as a foundation of algorithm's development. IEEE 14-bus test system and 4-bus test system were used to illustrate the veracity and effectiveness of the method. Comparison of the results with previous methods is also given.