

Power Flow Analysis Software Development Based on Geographical Information Systems (GIS) in Radial Distribution System Using Zbr Method

ABSTRACT

The development of information technology and the provision of data a system has grown rapidly as Geographic Information System (GIS). GIS is a geographic information system that contains a database of common spatial coordinate system uses as a reference. Planning geographic database requires information about the location of the equipment network and the data network used for modeling in GIS. The GIS system can be used to determine the use of electricity, load forecasting, load balancing, operational management and losses.

Power flow in radial distribution systems of electric power is needed as a basis for analysis of the system. So that can know the power flow in the systems. As a reference framework / form a branch of the radial distribution system, simple iterative method can be applied. This approach is called the method Zbr

Zbr method can analyze power flow in radial distribution systems. The voltage on the bus, each branch flows and bus, and power is flowing to the branch can be determined accurately. From the analysis of the flow in the distribution system feeders Surabaya Basuki Rahmat and compared by ETAP can be obtained different calculation less than 0.01%. Therefore it is monitoring through GIS can be done accurately.

Keywords: *Electric Distribution Power Systems, Power-Flow Analysis (Zbr Methods), Geographical Information System (GIS)*

