DEVELOPMENT OF AN UNDER FREQUENCY LOAD SHEDDING ALGORITHM

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ABSTRACT

In overload conditions caused by sudden outages in a Generator or a Transmission line in a Power System, loads have to be shed at selected feeders in the distribution system, to maintain system stability, namely frequency.

Different load shedding schemes can result in quite different performance, in recovery of system frequency.

In this research project, initially the existing load shedding scheme employed in the Sri Lankan Power System was studied. Improvements to the existing scheme using the rate of change of frequency (df/dt), is proposed.

A typical network was modelled using MATLAB/Simulink software package and a Load Shedding Scheme was simulated with this model. Improved performance was observed when the combination of Frequency (f) and Rate of change of Frequency (df/dt) were employed in the Load Shedding Scheme.

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