

adaptive security of the DG-HPS, we proposed this algorithm with the employment of PMU Control Network based DG units as the key security monitoring devices on both Power Generation and Distribution Sides. The proposed DG Unit monitors the faults in the associated zone or branch, by closely examining the line voltage and current phasor relationships and with an aid of the so constructed line amplitude, impedance and admittance parameter matrices of PGB and PDB lines, it will detect the faults and isolates the faulted lines in very quicker span without disturbing the remaining network. The Proposed algorithm is practically implemented and tested in MATLAB. The results of the implementation adjudged that the proposed algorithm is efficient in fault detection and isolation. A closer insight into the results produced by the proposed algorithm reveals the fact that the proposed algorithm outperforms all the existing methods and techniques.

5. Future Work

This algorithm is proven to be the best in performance in all aspects by its performance. In this project in order to reduce the complexity, the proposed algorithm is practically implemented with 9-line ring bus architecture. But there are no constraints on the size of the network and hence it can be extended to any large size DG-HPS with increased number of operational zones and any higher order bus. Increase in the physical size of the DG-HPS network doesn't cause any performance dissimilarities and extra limitations. As a consequence the physical size and processing capability of the internal components has to be justified with the proper selection of internal components of matched capacity and efficiency.

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