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ARTIFICIAL NEURAL NETWORKS BASED POWER LOAD FORECASTING.

The current demand for power to fuel the economies of nations is at stake due to the ever increasing demand of electricity compared to low power generation levels .This demand is attributed the accelerated economic growth in respective countries. Power generating companies are struggling to meet high demand with power unreliability in developing nations. This indicates a big challenge of balancing load demand with the generated power capacities. There is dire need for countries across the world to carry out continuous load forecasting assessment for adequate management of their scarce power resources. Therefore, research in load forecasting is a critical component for cost effective power supply management. Load forecasting plays a key role in reducing generation costs and improves the reliability of the power system. This paper proposes a Multi-Layer Perceptron (MLP) with back propagation algorithm as a learning strategy to train the neural network to intelligently asses power demand to enable cost effective power generation. The artificial neural network will assist in online monitoring systems where voltage and current is supplied to the network as input. The key feature of engaging (MLP) neural networks is its accuracy in assessing the variations that will affect predicted load. The results of medium term load forecasting are will be obtained from on-line applications. The performance of the proposed method will be evaluated by comparing the test results with the actual expected values. Experimental science approach will be used to achieve the concept viability.
Keywords: Back propagation, artificial neural networks, multilayer perceptron, Medium Term Power Load Forecasting (MTPLF)

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