

# A Comparative study of Energy Efficient Approach during Data Transmission

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**Abstract:** *Wireless Sensor Network has been used for collection of information from the non-approachable areas. WSN use sensor nodes for sensing the information from the environment. Sensor nodes have been powered using energy source that is battery connection. Battery source of WSN nodes can't be charged from any external device so that energy efficient utilization of the nodes for sensing and transmitting information is the major concern. Various approaches had been introduced in the past researches that provide better energy efficient protocol for enhancement of network lifetime and data transmission. In this paper various approaches have been implemented for WSN. Clustering based approaches have been utilized and assumed to be efficient approaches for data collection and data transmission over the network. In this paper approaches that have been reviewed and comparisons based on various parameters have been made are DEEC, LEACH, EIP-LEACH and Fuzzy based Clustering approach. Various parameters that are Network lifetime, Packet delivery Ratio and Network Stability period has been computed and discusses in this paper. Experimental results of above defined approaches have been demonstrated.*

**Keywords:** *WSN, Clustering, LEACH, Cluster Head, Energy Consumption*