

TECHNOLOGY TO IMPLEMENT THE CONCEPTUAL DESIGN CHANGES TO GAIN GOOD IMPROVEMENT IN HORIZONTAL AXIS WIND TURBINE PERFORMANCE AND EFFICIENCY

S.S.ARULAPPAN

Associate Professor, Department Of Mechanical Engineering, National Institute Of Technology,
Tiruchirappalli ,India.

ABSTRACT

Wind energy as a power source is attractive as an alternative to fossil fuels/ petroleum products, because it is plentiful, renewable, clean, and produces no harmful gas emissions.

Wind power generation is the extraction or conversion or just tapping of kinetic energy possessed by the moving air into some useful form of energy by the help of [wind turbines](#) to produce electricity, [wind mills](#) for mechanical power development and utilisation, [wind pumps](#) for pumping water or drainage, and even to push sailing boats.

This is an original experimental investigation towards improving the efficiency of the existing horizontal axis wind turbine currently manufactured by almost all the commercial manufacturers of this particular wind turbine.