



ChemTech

## International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.14, pp207-212,2017

### Optimization of hybrid PV-Wind Renewable energy system using robust algorithm

K.Thenmalar<sup>1\*</sup> and S.Mownisha<sup>1</sup>

<sup>1</sup>Department of Electrical and Electronics Engineering, Vivekananadha college of engineering for women, Tiruchengode, Nammakal, Tamil Nadu, India

**Abstract:** Hybrid renewable energy system consisting of photovoltaic, wind generator with battery, fuel cell and inverter. An optimized hybrid energy system is the combination of two or more energy sources which is used to supply the targeted load. In the energy system, one of the most important applications is the installation of well design hybrid energy system in remote areas where grid extension is very difficult and costly. But the proper design of the system is the challenging task as the coordination between different energy sources; energy storage and load are very complicated. The process of hybrid renewable energy system is selecting suitable components, its sizing and control strategy to provide efficient, reliable power and minimum cost. The system has been optimized by using robust optimization technique. Finally, the simulation result has been derived in MATLAB Simulink with the required formulation.

**Keywords :** Robust algorithm, solar energy, wind power, hybrid system.

K.Thenmalar *et al*//International Journal of ChemTech Research, 2017,10(14): 207-212.

\*\*\*\*\*