

## INTRODUCTION

It has been predicted by the World Energy Forum that fossil Fuels like oil, coal and gas reserves will be consumed Completely in less than another 10 decades. Fossil fuels Make modern life feasible. The abundant sources of energy Work to generate steam and electricity. Fossil fuels are also Used to fuel vehicles. It account for over 79% of the primaryEnergy used in the world and 57.7% of the amount is Consumed in the transportation and are decreasing rapidly. Non conventional energy sources have potential to reduce The energy problems being faced by the developing Countries. Alternate energy sources like solar energy, windEnergy, ocean energy, geothermal energy, biomass energy And fuel cell technology can be utilized minimize energy Shortage in India [1]. India stands fifth in the world in terms wind power Producer. The country has huge potential of generation from Non conventional energy sources. Government of India is Working efficiently to harness this potential. The Indian Economy is the world's eleventh largest. It stands fourth in Terms of purchasing power. Investors from developed Countries are interested in India due to the low manpower Cost and better quality production. India' energy demand is Rising continuously. India uses its maximum energy in Domestic, industrial and agricultural sectors in comparison To China, Japan, Russia and US [2]. Solar power generation is increasing in India. There will be A significant growth in the market in the next ten years, due To rising power demand and prices for fossil based fuels [3]. In terms of energy in India the demand/supply gap is around 8.2%, which is affecting the growth of industrial sector and Obstructing the progress of economy. India imports fossil Fuels like coal, gas and oil resulting in a huge economical Loss. As fossils fuels become more costly because of the fast Depletion, the country is suffering financial loss. Therefore it Is essential to adopt renewable energy technologies to deal With the energy crisis [4].

Utilization of renewable energy in domestic sector will aid The total energy requirement. For example, solar thermal Systems can replace the conventional electrical geysers in Domestic houses. Generation of electricity from solar PV Panels can reduce the dependency on grid power [5]. With

The reduction in energy cost there will be an increment in the Energy savings. As a result monthly expense at a domestic Level can be reduced.

Designing for a home renewable energy system is a method That involves analyzing the present electricity use and Planning energy efficiency actions to reduce it, observing Local codes and requirements, deciding if the system will Operate on or off of the electric grid, and understanding the Technology options available at the site.

The first step to take before using renewable energy is to see If there are ways to reduce the energy consumption. Proper Observation for all conventional devices in the home is Essential to find the more efficient way to optimize or Reduce the consumption. It is to be indicated that CFLs are Four times more efficient and last ten times longer than Incandescent bulb [6].

## METHODOLOGY

### 2.1 Micro Generation

Micro generation is a small scale generation of electric Power. It is a process by which low carbon electrical power is produced, it is a process adopted by domestic consumers To meet their own requirements. Solar photovoltaic panels And small wind turbines are used primarily. Micro Generation technologies can be installed easily. The Utilization of micro generation technologies at the domestic Level can supplement the regular grid supply.

#### Solar energy in India

Solar energy is the most useful of all the sources of non Conventional energy. It will be one of the most useful Sources of renewable energy even if we could utilize a small Amount of it. Solar Photovoltaic cell transforms the solar Energy directly to electrical energy. The solar photovoltaic Cells in India are primarily used for irrigation purpose, Drinking water, and rural electrification. In India for nearly 300 days in a year the sunshine is available.

#### Indian Economy

Power is the most important constituent of infrastructure Essential for the economic growth and welfare of the Country. The presence and development of sufficient Infrastructure is crucial for the sustained growth of the Indian economy. Power sector of India is one of the most Diversified in the world. Sources of power generation range From fossil fuel based conventional sources such as coal, oil And gas to renewable sources such as wind and solar. Hence Sustained economic growth is resulting in high electricity Demand in India.

#### Experimental Procedure;

A survey has been done to understand the economical Condition of a city known as Siliguri in West Bengal, India. The data of the monthly income along with the expenses and Savings of 10 consumers from different level of the society Were collected. Monthly expenses including electricity Expense, food-groceries, transportation, internet and cell, Cooking gas, child education and other expenses were Considered. The monthly savings were calculated at each Level. The case Study is presented to utilize the renewable energy sources Effectively at domestic sector to minimize the energy Demand from grid, which in turn enhances the economic conditions.

#### CONCLUSION

In this paper the economical assessment has been done at Domestic level to understand the energy consumption and The effect of alternate energy particularly solar energy and The use of CFLs to help the consumer save energy. From the Clear that non conventional buildings with the aid of solar Energy can make the customer independent of paying the Price to the grid at a certain level. Therefore, a partial shift To renewable energy sources can make India economically Healthy. Green energy revolution in India can improve the Standard of living in domestic sector.