

1st Prize winner

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TOPIC – MY HOME –ENERGY EFFICIENCY HOME

Introduction-

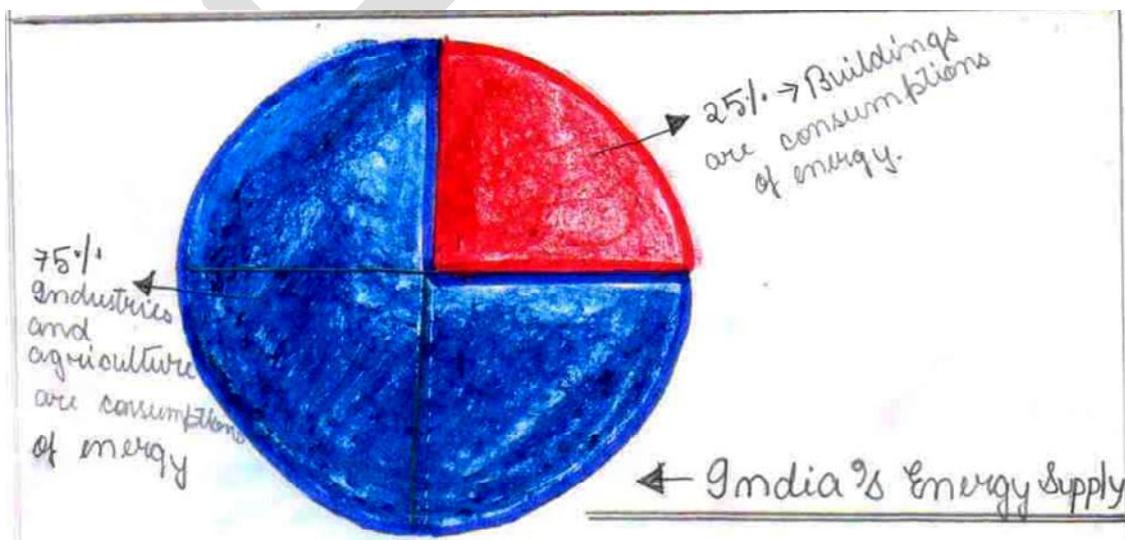
Energy is the basis of civilization. Without energy modern life would cease to exist. To safeguard the future of mankind, there steps are essential which are-

- (i) Energy efficiency ÷ first
- (ii) Renewable resources ÷ second
- (iii) Fossil fuels ÷ last

- (i) Energy efficiency and (ii) Renewable resources are the two pillars of sustainable energy policy.

How to make energy efficient home and its purposes-

By increasing home energy efficiency, there is huge potential for energy saving in large magnitude. To conserve natural resources and increase energy efficiency, design and construction of green building design concept is very essential. Buildings are the 3rd largest consumptions of energy after industries and agriculture.



- 1 Effective energy efficient Building design can include the use of (i) Low Cost Passive Infra Red (PIR) to switch off Lightening automatically and lux-Levels can be monitored using Day light Sensors to Building lightening scheme.
- 2 Smart Meters adopted by commercial sector.
- 3 Proper placement of windows and sky lights and use of architectural features which reflect light to reduce the need of artificial lightening.
- 4 Power, Quality Analyses can be introduced in the building to make the building more energy efficient.
- 5 Modern energy efficient appliances such as refrigerators, dishwashers, cloth washers etc., significantly use less energy than older appliances.
- 6 Modern Power Management system could also reduce energy by turning the appliances off or putting them into low energy mode after a certain time.
- 7 Insulating a home and using CFC, T-5 lights to make energy efficient home.
- 8 Tight Building Design, Including energy efficient windows, additional Thermal Insulation of Walls, Basement slab and Foundation, white Roof system saves more energy.
- 9 Rocky Mountain Institute points out that there are abundant opportunities to save energy by using energy efficient pumps, motors etc.
- 10 REEDS (residential energy efficient Development system) found that leaky ducts should not be allowed.

Government Action-

- (a) There must be some energy efficient norms or standards for household electrical appliances such as televisions, refrigerators etc which is an effort to reduce emissions of greenhouse gases.
- (b) Government must encourage the development of green energy resources by mandating power distributing companies to buy their part of requirement from producers of non conventional energy.
- (c) Rain water harvesting to be adopted in large scale in colonies, apartments, residential buildings etc. to increase energy efficiency.

Conclusion ó

Some organizations which promoted energy efficiency are-

- (a) IEA
- (b) European council for an energy efficient economy.
- (c) International electro-technical conservation.

As the 1st commitment period for reduction of greenhouse gas emissions, Copenhagen world climate summit will continue this commitment of Kyoto Protocol for reduction of green house gases.

BASIC (Brazil, South Africa, India and China) grouped draft proposal 40% to 45% carbon emission reduction.

Some energy efficient (i) buildings (ii) industrial process and (iii) transportation could reduce world's energy needs by rd.

Vehicles, Business establishment where energy efficiency is seen as a largely updated solution addressing Global Warming, energy security and Fuel Depletion. Implementation of energy efficiency measures including building code and appliance standards in California reflected in the reduction of energy consumptions.

Use of Solar Chimney, Wind Tower, Earth Tunnel, Biogas Plant, Solar water Heater, Solar Photo Voltaic Cells, Rain water harvesting etc. makes Our Home ó Energy Efficient Home.