PLAN FIVE SECTION DYNAMISM PROFICIENT EDIFICE

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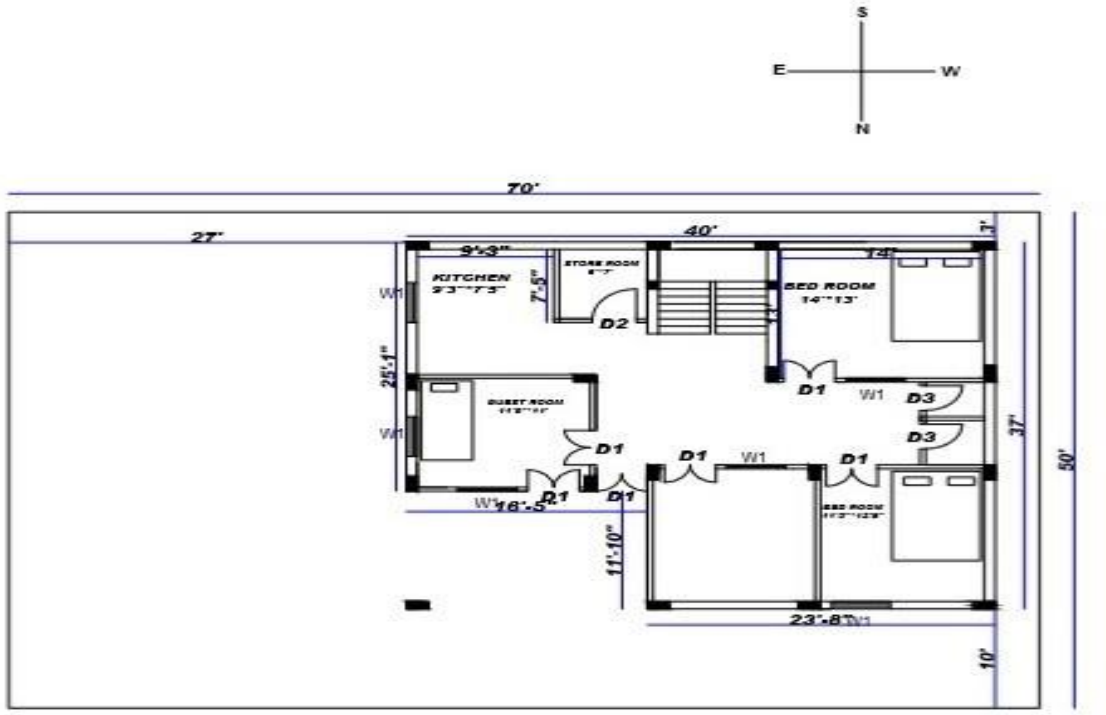
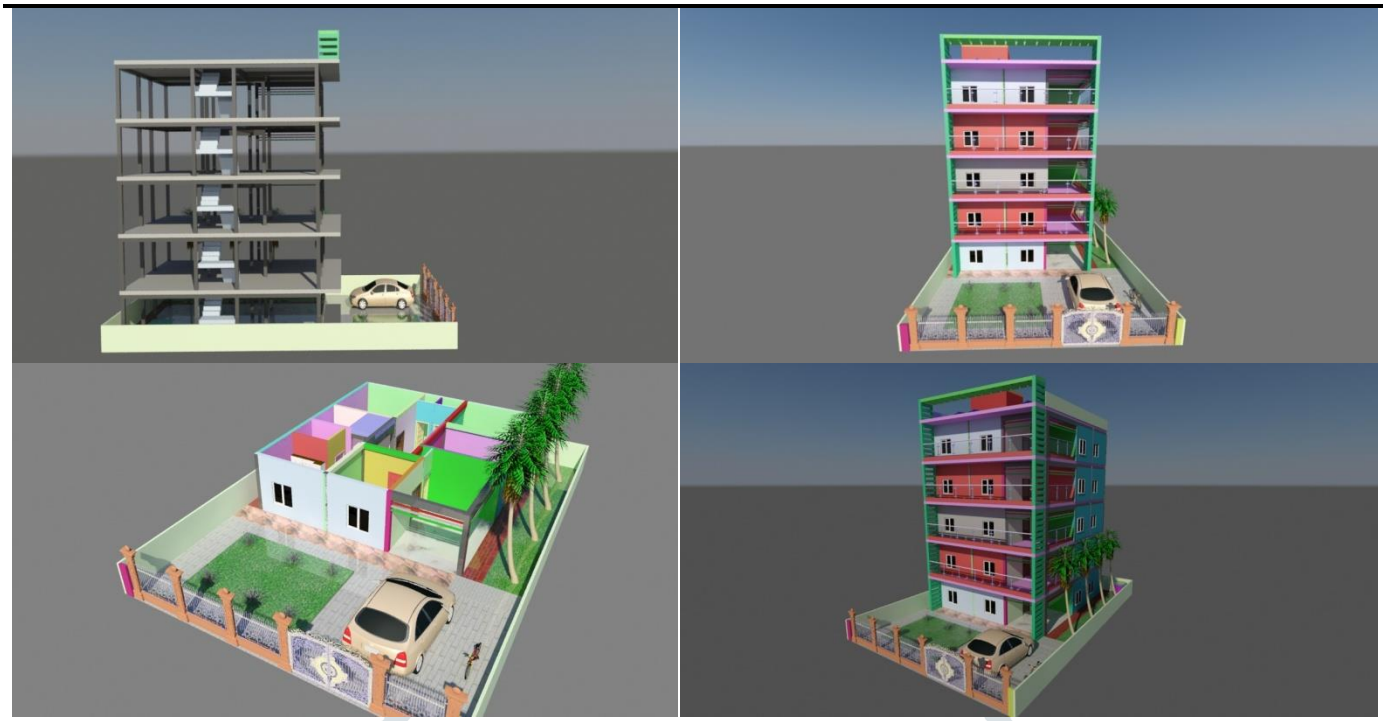
Abstract- Due to the change in climatic condition the release of greenhouse gases mainly carbon dioxide and chloro floro carbon increases , which affect the environment. Mainly the INDIA and CHINA both are the greatest country in the world from the point of view of population is more so greenhouse gases more .

Keyword-Climate change, energy source, reuse of water, climate condition effect, Natural gases

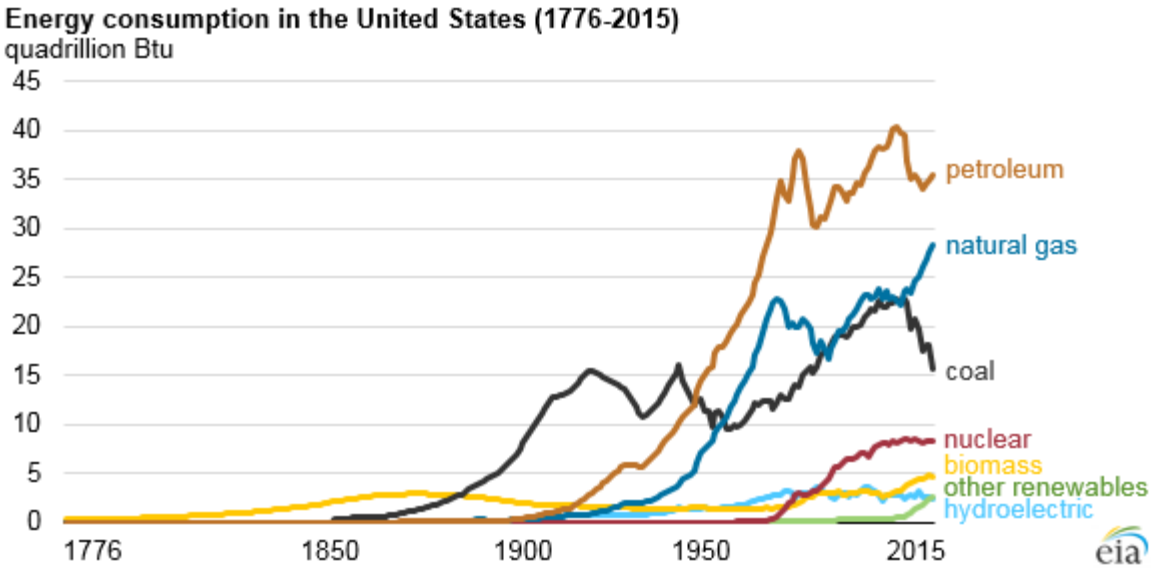
INTRODUCTION- As we all expected that about 40% of energy consumption is consumed by building and remaining 60% energy used in commercial institutional road school etc .so we will have to reduce this major consumption of energy to make INDIA more economical and pollution free .World studies have acknowledged, buildings were responsible for 7.85Gt, or 33% of all energy-related CO_2 emissions worldwide (Price et al., 2006) .More important than the greenness of each and every material is the way that the parts work together to become wonderful, healthy spaces that offer humans contact with the natural environment while not over-using resources. In this building mainly uses three Software AUTOCAD for plan layout 3DS MAX for Elevation and StaddPro Use for Analysis the Structure.



Door	
D1	6'*3'6"
D2	6'*3'
D3	6'*2'6"
Window	
W1	4'*4'



INDIAN URBAN POPULATION AND ENERGY CONSUMPTION-The global urban population is expected to grow from 47% of the total in 2000 to 70% in 2050. The energy consumption depend on building size, lighting and weather condition .L.E.D light is low consumption of electricity so we use L.E.D light .from fig is clear that the consumption of energy was very less in 18th century because due to source of natural energy .So we are using maximum natural resources in green building . the consumption of energy 1776 to 2015 show in fig



Concept of energy efficient building-We have to conserve the environment as much as possible energy sources is limited to generate the electricity main source is coal but coal is the limited so we use solar energy for electricity. Day by day water level is decrease so green building use the recycle water for gardening and vehicle cleaning .

Energy source-The many source of the energy are - nuclear energy, fossil energy -- like oil, coal and natural gas -- and renewable sources like wind, solar, geothermal and hydropower. The above energy sources are converted into electricity, and energy source, which flows through power lines and other transmission infrastructure to your home and business.

Solar panel- They are called "solar" panels because most of the time, the most useful source of light available is the Sun, called Sol by astronomers.

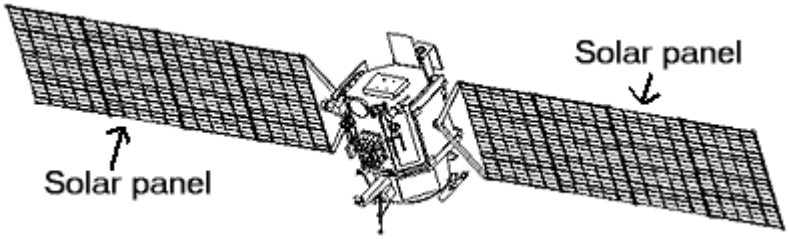
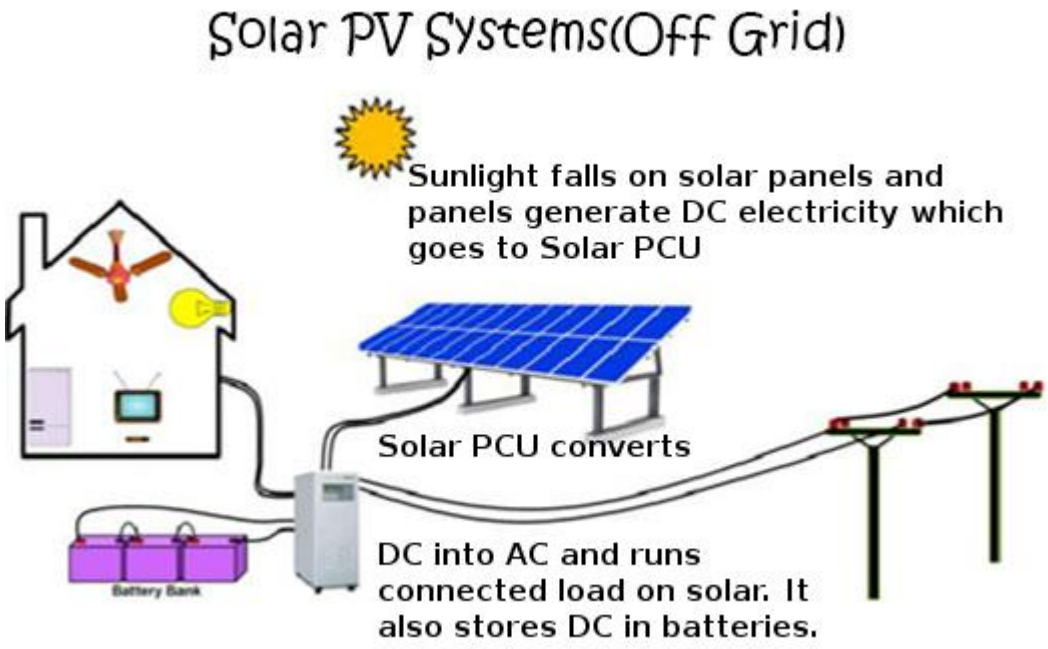


Figure from NASA's Jet Propulsion Laboratory Deep Space One Web Site: http://nmp.jpl.nasa.gov/ds1/



Off-Grid solar diagram with battery

1kW System Specifications

Parameters	Capacity
1. Total PV Module	1 Kw
2. PV module capacity	250 kwp
3.No. of Panels	4 nos.
4 Solar PCU/Inverter	1 KW
5 Batteries (150 Ah X 12 V)	2 Nos.
6 Space required	8 sq meter
7. Supporting Structure	GI Chanel

1kW Off-Grid Solar Plant.

1-kW Complete Solar System

WATER LOSSES –In this energy building reduce the water losses like rainfall, filter the bathroom water and reuse for toilet, and treat the sewage treatment

(A) ***Sewage treatment***-sewage treatment is a process in which remove the contaminate from waste water the green building mainly three process filtration screening and primary sedimentation .

Wall- It maintain the temperature 3to 4 degree for absorbing the Heat And Cold.

Gardening – In gardening different type of trees are planted but most of the NEEM trees are Planted .Which helps to provide a sufficient amount of Oxygen .

Energy efficient building in india-Majority of energy consumption in buildings occurs for HVAC, lighting pumping, etc, Higher the energy consumption greater the opportunities for energy efficiency Energy conservation and efficiency are the buzz words these days but developed countries have left the developing world far behind. GRIHA is the organisation give the rating system 5star 4star 3star green building.

If this is built inefficiently, we will be locking-in this inefficiency The projections for energy demand in 2032 imply a fourfold increase in requirements.

Green building of rating system- GRIHA is the department of rating system .It give the rating after the full fill rules and regulation of green building.

It has been conceived by The Energy and Resources Institute (TERI) and developed jointly with the Ministry of New and Renewable Energy, India.

Result

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*** STAAD.Pro V8i SELECTseries4 ***

*** Version 20.07.09.31 ***

*** * Time= 17:21:52 ***

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*** USER ID: ***

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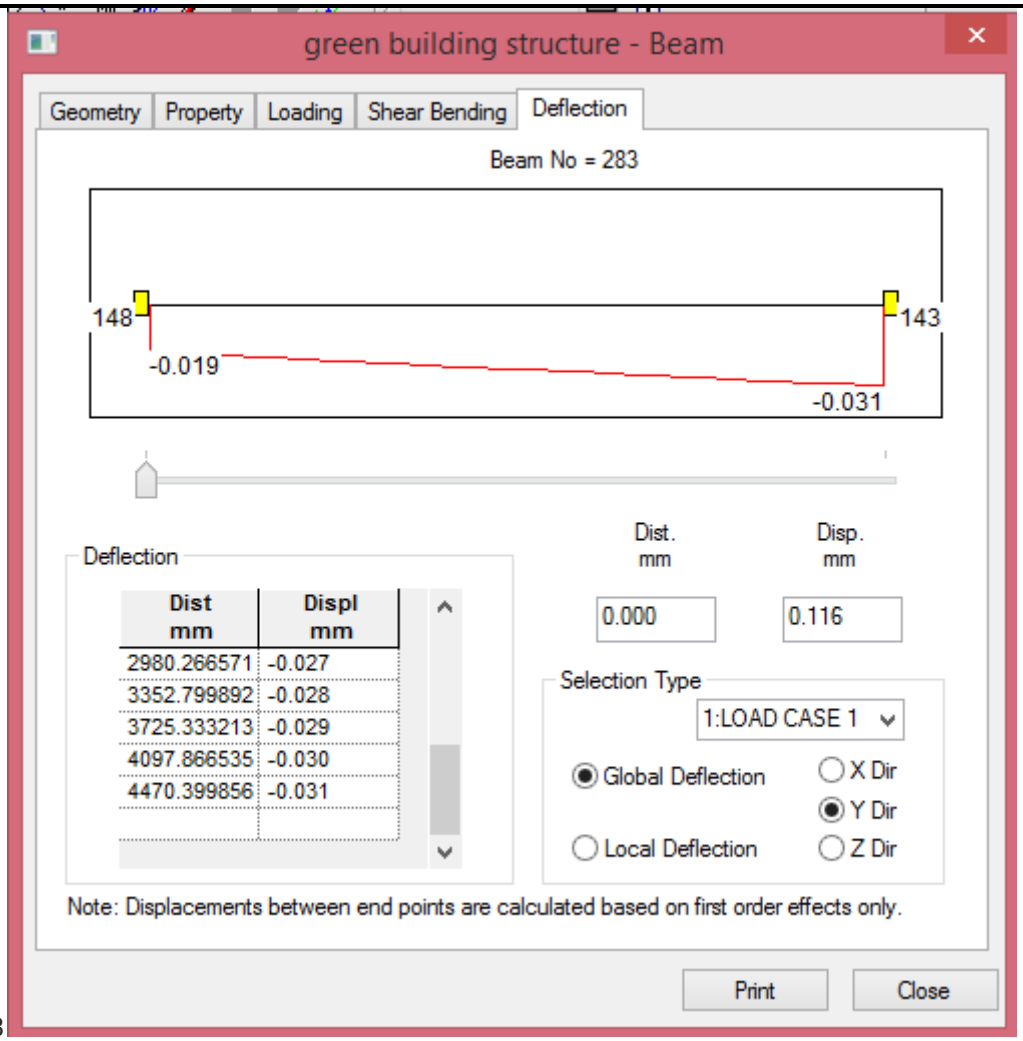
NUMBER OF JOINTS 139 NUMBER OF MEMBERS 235

NUMBER OF PLATES 0 NUMBER OF SOLIDS 0

ORIGINAL/FINAL BAND-WIDTH= 24/ 18/ 102 DOF TOTAL PRIMARY LOAD CASES = 2, TOTAL DEGREES OF FREEDOM = 720

DISK SPACE = 13.1/ 88358.2 MB

BAR DIA (in mm)	WEIGHT (in New)
8	15250
10	5504
12	14715
16	10673
20	5849
25	6401
32	3868



*** TOTAL= 62258

Calculation for the brick sand cement and steel

One brick size =23.5*11.5*7

=1891.75 cubic cm

=0.00189 cubic m

One brick with mortar =24.5*12.5*8

=.00245cubic m

The total wall one floor =47.12

Volume covered by brick=19233*0.0189=36.34cubic meter

Volume covered by mortar=47.12-36.34=10.78cubic m (wet volume)

We know that dry volume is increase 33%

Volume covered by mortar=10.78*1.33=14.3374(dry volume)

The Ratio is used (1:4)

(14.3374*1)*5=2.86

The cement density=1440

2.86*1440=4118.4/50=82.36

Approx=83 Bad cement required

Sand required in 14.3374 cubic m

(14.374*4)/5=11.46*35.314=405

Approx400 cubic feet sand required

Brick=19233*6=115398Rs

Cement=83*210=17430Rs

Sand=400*90=36000Rs

Total Cost of one floor Brick Sand Cement is 168825

Total Cost of Five Floor is 5*168825=844125

Requirement of Concrete For Slab

Slab is 516*426*4 inch

The Total Area of the slab is 14.40 cubic m(wet volume)

M15 concrete is used (1:2:4)

Requirement of cement=22.33*1/7=3.19cubic m

=3.19*1440=3636.6/50=73 Bag cement required

Requirement of sand =22.33*2/7=6.38 cubic m

=6.38*35.3147=225.30cubic feet

Requirement of Aggregate=22.34*4/7=12.7657 cubic m

12.7657*35.70=455.71 cubic feet

Cement-73*210=15330Rs

Sand-225.30*90=20277Rs

Aggregate-455*70=31850Rs

Total Cost=67457

Requirement of steel

Main Bar -4757feet

Distribution bar-944feet

We know that formula – $d^2/162*length$

Main bar-12*12/162*1450.4=1289kg

Distribution Bar-8*8/162*944=372.89kg

Total steelrequirement-1661.89kg

Total cost of Steel=1661.86*51=84756Rs

Conclusion- The energy efficient building makes the whole environment free from pollution and makes fresh air which is breathed by every person with ease and it makes the people healthy. In this building we collect the all garbage make it fertile and we use this in cultivation .The electricity is full fill by the solar panel Also in this we reuse the water of rainfall in washing, lawning and in water closet, these safes the water. Main thing in this the use of natural energy, this makes the country economical because it is found that the much energy wastes in houses. Total Cost of Five Floor is 5*168825=844125Rs for brick work. The total cost of slab 761065Rs

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