

Chief Editor

Dr. A. Singaraj, M.A., M.Phil., Ph.D.

Editor

Mrs.M.Josephin Immaculate Ruba

EDITORIAL ADVISORS

1. Prof. Dr.Said I.Shalaby, MD,Ph.D.
Professor & Vice President
Tropical Medicine,
Hepatology & Gastroenterology, NRC,
Academy of Scientific Research and Technology,
Cairo, Egypt.
2. Dr. Mussie T. Tessema,
Associate Professor,
Department of Business Administration,
Winona State University, MN,
United States of America,
3. Dr. Mengsteab Tesfayohannes,
Associate Professor,
Department of Management,
Sigmund Weis School of Business,
Susquehanna University,
Selinsgrove, PENN,
United States of America,
4. Dr. Ahmed Sebihi
Associate Professor
Islamic Culture and Social Sciences (ICSS),
Department of General Education (DGE),
Gulf Medical University (GMU),
UAE.
5. Dr. Anne Maduka,
Assistant Professor,
Department of Economics,
Anambra State University,
Igbariam Campus,
Nigeria.
6. Dr. D.K. Awasthi, M.Sc., Ph.D.
Associate Professor
Department of Chemistry,
Sri J.N.P.G. College,
Charbagh, Lucknow,
Uttar Pradesh. India
7. Dr. Tirtharaj Bhoi, M.A, Ph.D,
Assistant Professor,
School of Social Science,
University of Jammu,
Jammu, Jammu & Kashmir, India.
8. Dr. Pradeep Kumar Choudhury,
Assistant Professor,
Institute for Studies in Industrial Development,
An ICSSR Research Institute,
New Delhi- 110070, India.
9. Dr. Gyanendra Awasthi, M.Sc., Ph.D., NET
Associate Professor & HOD
Department of Biochemistry,
Dolphin (PG) Institute of Biomedical & Natural
Sciences,
Dehradun, Uttarakhand, India.
10. Dr. C. Satapathy,
Director,
Amity Humanity Foundation,
Amity Business School, Bhubaneswar,
Orissa, India.



ISSN (Online): 2455-7838

SJIF Impact Factor (2016): 4.144

EPRA International Journal of

Research & Development (IJRD)

Monthly Peer Reviewed & Indexed
International Online Journal

Volume:2, Issue:4, April 2017



Published By :
EPRA Journals

CC License





SJIF Impact Factor: 4.144

ISSN: 2455-7838(Online)

EPRA International Journal of Research and Development (IJRD)

Volume: 2 | Issue: 4 | April | 2017

GREEN BUILDING

Anjali Singh¹

¹ Btech Student, Department of Civil Engineering, Babasaheb Bhimrao Ambedkar University
Uttar Pradesh, India

Pratima²

² Btech Student, Department of Civil Engineering, Babasaheb Bhimrao Ambedkar University,
Uttar Pradesh, India

Navneet Singh³

³ Btech Student, Department of Civil Engineering, Babasaheb Bhimrao Ambedkar University,
Uttar Pradesh, India

Prashant Kumar Gangwar⁴

⁴ Associate Professor, Department of Civil Engineering, Babasaheb Bhimrao Ambedkar
University, Uttar Pradesh, India

ABSTRACT

Green building concept is a solution to the environmental crisis currently present in the world. It is a promise of the better future and a sustainable development and everyday living. It is a budding initiative and has lots of scope for the development of a better way of constructing than the previous ones present. The building sector has the greatest potential to deliver significant cuts in emissions at little or no cost. Buildings account for 18% of global emissions today, or the equivalent of 9 billion tonnes of CO2 annually. If new technologies in construction are not adopted during this time of rapid growth, emissions could double by 2050, according to the United Nations Environment Program. Green building practices aim to reduce the environmental impact of building. The main objective of Green Building is the making of buildings which are environmentally sustainable. From the processes involved in the building of green building, the materials used, the operation of green building to its demolition; everything should be as environment friendly as we can make it to be. Green building employ the renewable resources of energy such as solar energy, etc. in its usage. The rating of green building internationally is done by LEEDS whereas the in the Indian context the institution awarding the rating is Indian Green Building Council. Smaller steps such as use of LED's in lighting and use of high star rated appliances also contribute to the sustainability of our day to day activities. Green building is water efficient such that it reduces the wastage of water to a minimum and it requires the use of practices to use water efficiently. A Green building is material efficient and energy efficient. IN terms of cost of building, the initial cost of building a green building is more as compared to the conventional buildings but within some years of its construction the Green building returns the total cost of building in terms of reducing electricity bills, etc., thus it is cheaper than the conventional building in the long run. and it economically efficient too. Green Building in the need of the hour in the current scenario.

KEYWORDS: sustainable, energy efficient, cost and payoff, waste reduction, LEEDS, water efficient

1. INTRODUCTION

Green building refers to both a structure and the using of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition. In other words, green building design involves finding the balance between homebuilding and the sustainable environment. This requires close cooperation of the design team, the architects, the engineers, and the client at all project stages. The Green Building practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by: Efficiently using energy, water, and other resources. Protecting occupant health and improving employee productivity. Reducing waste, pollution and environmental degradation.

2. LEEDS CERTIFICATION

Leadership in Energy and Environmental Design (LEED) is a set of rating systems for the design, construction, operation, and maintenance of green buildings which was Developed by the U.S. Green Building Council.

3. WASTE REDUCTION

Sustainable building practice goes one step further than conventional practice, by designing for waste minimisation in the operation of the building, through greywater recycling, composting toilets, on site food composting and off-site recycling facilities, thus helping to reduce residential waste. There can be a reduction in waste by sticking to the three R's of reduce, reuse and recycle. We can reduce waste by calculating the exact amount of material required for building and the reuse and recycle of waste can be done by different methods during operation of building by providing different disposal bins for the recyclable waste.

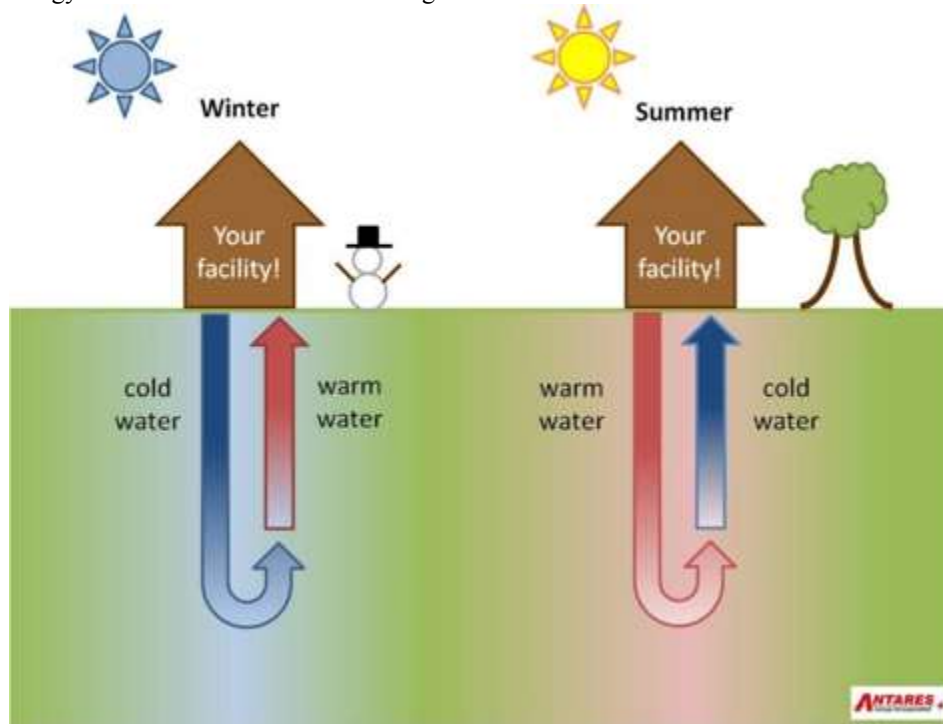
Waste reduction is also done by using of the composting technique which also provides green manure to the occupants



4. ENERGY EFFICIENT, WATER EFFICIENT AND COST EFFICIENT

Green buildings provide energy efficiency by using of the renewable resources during the running ,Solar energy energy and wind energy can be harvested by solar panels and wind turbines, whereas geothermal energy can be used for heating

purposes.We should also use star rated appliances and the use of LED's for lighting purpose.Occupancy sensors are employed to turn off the lights and fans and other appliances when the occupants are not present



Use of geothermal energy

Water efficiency can be brought about by use of rainwater harvesting techniques ,use of taps and faucets which are designed to consume less water and reuse of grey water for washing , gardening , etc

5. COSTS AND PAYOFF

We need an innovation to be economic to bring in the interest of the developers in employing it to usage.The cost of green building is initially more than a conventional building , but within few years of its construction Green building pays off its cost of construction in terms of reduced electricity bills , water bills , etc.

6. CONCLUSIONS

It is concluded after research on the concept of green building and a site visit to the site BIPV:ANSAL EXPERIENCE CENTER , LUCKNOW , that the green building is a new method of building which is a solution to many of our

problems related to environmental degradation with it being energy efficient , water efficient as well as cost efficient and waste disposal efficient which makes it a sustainable development option for the betterment of all

ACKNOWLEDGMENT

Thanks to Goel sir ;Executive Engineer , Babasaheb Bhimrao Ambedkar University,Lucknow and Prashant Sir ;Assistant Professor ,Civil Engg. Dept, Babasaheb Bhimrao Ambedkar University , Lucknow for guiding us.

REFERENCES

- 1) https://en.wikipedia.org/wiki/Green_building
- 2) <https://igbc.in>
- 3) <http://www.sustainablebuild.co.uk>
- 4) www.usgbc.org