

Design Of Green Building

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Abstract: The term "green building" is used to describe buildings that are designed, constructed and operated, to have a minimum impact on the environment, both indoor and outdoor. The discussions of green buildings refer to the importance of providing an acceptable, if not exceptional, indoor environment for the building occupant. These discussions of indoor environment quality have not included many specific recommendations or criteria for building design, construction, or operation. The building projects described as green building demonstrations often make reference to indoor air quality but these references are often qualitative and general. In addition, rating systems that have been developed to assess the "greenness" of a building are based largely on design features and are not particularly specific with respect to indoor Air- Quality of green buildings.

Key Words: —Green building, Environment, Building Design.

I. INTRODUCTION

Green building which is also known as green construction or sustainable building is refer to both the application of processes and a structure that are environmentally resource and responsible efficient throughout a building's life-cycle:

From planning to design, construction, renovation, operation, demolition and maintenance and. This requires close cooperation of the architects, the contractor, the clients and the engineers, at all the stages of project. The Green Building practice complements and expands the classical building design concerns of economy, utility, durability, and comfort. Green building or sustainable design, is the practice of increasing the efficiency with which buildings and their sites use water, material and energy, and of reduces impacts on human health and the environment for the entire lifecycle of the building using this concept.

The green-building concepts extend beyond the walls of buildings and include site planning, community and land-use planning issues as well.

The development and growth of our communities has a large impact on our natural environment. These design, manufacturing, construction and operation of the buildings in which we live and work are responsible for the consumption of many of our natural resources.

1.1 Objectives of Green Building

The common objective of green buildings is to reduce the overall impact of the built environment on human health and the natural environment by:

- Protecting occupant health and improving employee productivity.
- Reducing waste, pollution and environmental degradation.

1.2 Need of Green Building

Sustainable architecture is the type of architecture that seeks to minimize the harmful impact that buildings have on the environment. Such sustainably built green buildings are environmentally responsible and resource-efficient, right from location selection to the demolition after its lifecycle.



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Policy Initiatives for Green building in India

2000	Energy Conservation Act (ECA).
2001	Establishment of Indian Green building Council.
2002	Formation of Bureau of Energy Efficiency under ECA 2001.
2005	Bureau of Indian standards published the National building Code.
2006	Issuance of Energy policy draft. The Ministry of Environment and Forests makes Environment Impact Assessment necessary for all buildings with built area of 20,000 sq.kms.
2007	Green rating for integrated habitat assessment was adopted as the national rating system for green buildings in India.
2008	National Action Plan on Climate Change was launched, Integrated energy Policy 2008 approved by the cabinet.
2014	Announcement of Smart Cities program.
2015	India signs first Union Climate Change Paris Agreement.
2016	First 20 Smart Cities announced. States of AP and Telangana adopting mandatory compliance measures for building efficiency.

In the absence of structured post construction performance, Green certified residential projects are yet to gain prominence. In the absence of a structured performance metric system buyers are unwilling to buy premium houses. Thus, the state government is providing additional FSI to developers for encouraging their involvement in green projects. Hospitality sector in India is adopting sustainability practices for promoting corporate social responsibility and reducing operating costs (VESTIAN, 2016).

1.3 Characteristics of green buildings

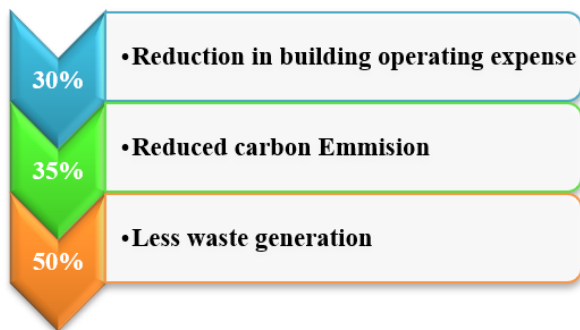
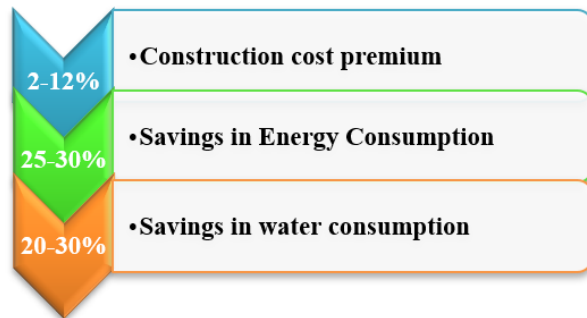


II. IDEAL GREEN BUILDING MATERIALS

The material should be renewable and recourse efficient. The material should support environment health in other words it should provide healthier environment to public. Indoor air quality should be excellent. The material should be appropriate for application for which it is proposed to be used and should be economical to use.



2.1 Cost-benefit analysis



2.2 Advantages

- Eco-Friendly
- High Efficiency.
- Low maintenance cost.
- High.
- High ROI Rates.

2.3 Future Scope

We think that, by implementing green building concepts, we are going towards the prevention of environment. It reduces bad impacts from various industries and green houses on the environment. This concept lead towards 3Rs that is Reduce-Reuse-Recycle and also less harm to the nature by using its own natural resources like Solar energy, wind energy etc. So, this concept actually means – “Save Earth, Save Yourself”.

III. CONCLUSION

The aim of this project to understand planning and designing of green building. That we have achieved is we studied different green technologies for buildings. By Planning and

Designing, we get to learn the building layout, Development of plans, Elevations, Sections etc. The various green technologies and different materials with their feasibility studies and their cost comparison. The structure of our building is designed using Auto-Cadd software. This green building incorporates the use of clean, renewable, sustainable energy and efficient use of natural resources. In green building, energy saving is extended by 30-40%, Water saving is up to 20-30%. And of course, it gives us efficient use of water. This project is also done by considering LEED certification standards.

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