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Green Building Design: Approach towards Sustainable Energy Utility

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Abstract: As the world journeys towards a global climate change architecture and to finalize sustainable development goals that will replace the millennium development goals from 2015 onwards, financing becomes the critical pillar to move towards these global goal posts. We are racing ahead to set its own vision and domestic ambitions, scaling up its clean energy targets ,planning smart cities, setting strong efficiency measures.

key words: green construction, sustainable energy performance, resource efficient.

I. NTRODUCTION

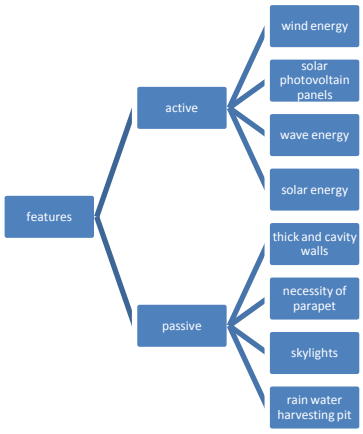
Based on advancements, new technologies are timely developed to complement classical building design concerns of economy, durability, comfort and utility. The common objective of the design of green buildings is to reduce the overall impact of the man made environment on human health and natural environment by-

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

According to the natural resources inventory, approximately 107millionacres(430,000km2) of land in the united states are developed. The international energy agency released a publication that estimated that existing buildings are responsible for more than 40% of the world's total primary energy consumption and 24% of global carbon dioxide emissions.

I. GREEN BUILDING CHARACTERISTICS

- *Water management*- Installation of water efficient appliances, kitchens, in bathrooms to reduce water consumption.
- *Indoor environment*- Designing the HVAC system and minimize the number of indoor air contaminants by selecting paints, coatings, adhesives, carpets, etc.
- *Site design and planning*-Locating the building within vicinity of commuter, rail or bus lines and establishing building specification that maintain current level of storm water runoff.
- *Material and product selection*-Using rapidly renewable material such as bamboo flooring, wool carpets, cotton batt insulation, genuine linoleum flooring or oriented strand board.
- *Energy*- Eliminating the use of CFCs in HVAC system and collaborating with electricity providers from solar wind or geothermal energy.



II. GOALS AND STRATEGIES

The primary goal aims at the eradication of energy (especially fossil oil) crisis and environment pollution concerns. Another motives for building green include environmental, economic and social benefits. The need and desire for more energy efficient and environmentally friendly construction practices can be achieved through the same. Minimization of urban sprawl and needless destruction of valuable land, habitat and green space, which results from inefficient low density development . Preservation of key environmental assets through careful examination of each site is being stressed.

II. KEY STRATEGIES AND TECHNOLOGIES:

1. More efficient use of space, renovating and reusing the existing vacant buildings, sites and associated infrastructures.
2. Steer clear of sites that are essential part of ecosystem in any region when new development is unavoidable.
3. Evaluation of the location and orientation of buildings and improvements in order to optimize the use of passive solar energy and natural day lighting.
4. Efficient use of existing mass transit system including provisions for safe storage of vehicles.
5. Minimizing the urban heat island effect by maximizing use of pervious surfaces, using walkways, light colored roofs

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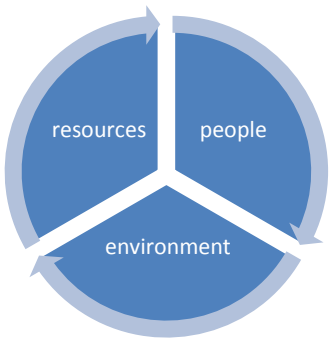
and pavements

6. Using landscape designs to restore and preserve the regions natural habitat and heritage while emphasizing the use of indigenous, hardy, drought resistant trees.

7. Reducing night time light pollution by avoiding over illumination of the lights and use low cutoff exterior lighting fixtures.



- Land conservation and outdoor environment protection
- operation and maintainence
- water savings and utilisation indoor air quality

III. SOME EXAMPLES OF GREEN BUILDING DESIGNS

- Blu homes mksolaire, a green building designed by Michelle Kaufmann .
- Taipei 101, the tallest and largest green building of LEED platinum certification in the world since 2011.

IV. CONCLUSION

Clean energy is an imperative for energy security and access. Restricting excessive investments in polluting sectors and incentivizing private investments in green industries, as well as leveraging the magnifying effect of limited funding so that private green investments can snowball to several or even over ten times of total contribution, will be the key to promoting green economic growth, facilitating structural transition, reducing pollution and fostering new growth drivers. The global green market saw $34 billion of issuance last year , growing rapidly from only $10 billion the previous year. Green bonds could provide innovative routes for green project financing. The market for these innovative products needs to be developed with urgency to allow long term finances into sustainable development priorities. The green asset class will emerge as the future of corporation. It is time the financial sector realigns itself towards the green asset class and the green economic agenda of the future.

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