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GREEN BUILDING



ABOUT US

Green Solarwale India Pvt. Ltd., founded in 2016 is a high-tech enterprise primarily functioning in the fields of providing all-round green solutions by means of research and development, detailed and accurate analysis, implementation, and conclusively training in the fields of solar energy harnessing and utilization. This is achieved through a distinct and controlled timeline of activities custom designed to suit the requirements and restrictions specific to each site. Working in partnership with a globalcommunity of developers pooling in engineering and construction experience, unidirectional in their focus, towards bettering equally the end customer and the environment as a whole.

Our array of solar advisory includes complete engineering, procurement and construction services at par with international standards. Not just limited to providing turnkey solutions, The Solarwale also provides Indian Green Building Council (IGBC) and Green Rating for Integrated Habitat Assessment (GRIHA) certifications to a host of structures ranging from new buildings to existing ones, across Green Homes, Schools, Factories, SEZ's, Townships, Interiors and Residential Societies.

We also believe in giving back to the society in any manner possible, hence have comprehensive interests in providing quality training by means of academic and practical aid both, by conducting research projects at secondary and higher secondary levels in order to indulge and enforce a greener and cleaner tomorrow from a very early life stage. At the university level, the research project is designed to analyze the campus as a neighborhood with reference to Leadership in Energy and Environmental Design (LEED) rating systems and their consequent conversion to Green Buildings. Taking that extra step, The Solarwale provide specialized sessions and guidance to aspiring green building professionals enabling them to supplement their Curriculum Vitae's with nationally and internationally acclaimed Green Building credentials. In order to achieve our goal of a healthy built environment, we provide various services with utmost punctuality, client satisfaction and cost efficiency. For the first time in the country we have introduced the credit based fee structure, i.e. the client need to pay only for those credits which are achieved by the project team.

Stepping into the Indian markets with our global expertise and high-value engineering solutions, we have your tomorrow covered, today.

GREEN BUILDING

Conventional buildings are largely responsible for the adverse effects on Urban Built Landscapes. As an alternate, the concept of green buildings was introduced in the last decade that focuses on using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle. Although new technologies are constantly being developed to complement current practices in creating greener structures, the common objective of green buildings is to reduce the overall impact of the built environment on human health and the natural environment.

We promote Green Buildings by the seamless integration of sustainability and accountability. We firmly acknowledge the intrinsic relationship among the occupant's health and the infrastructural development and hence, strive for designs and concepts which are certified to be tuned to your specific requirements and more importantly be environmentally beneficial in the long run.

Features of Green Buildings

- Provision of grass pavers in parking areas
- Rain Water Harvesting
- Rooftop Solar Power system
- Sewage Treatment Plant
- Organic waste composter
- Waste Segregation
- E-waste management
- AAC Block construction
- Efficient and sufficient landscaping and horticulture



Benefits of Green Buildings

- Tangible Benefits
 - USP for enhanced branding and marketing
 - Increased market value
 - 20-30% energy savings
 - 30-50% water savings
- Intangible Benefits
 - Improved indoor environment quality
 - Higher occupant productivity
 - Health and well-being
 - Excellent natural lighting

Incentives for Green Buildings

- Provision of extra FAR by various state governments
- Tax rebates by various development authorities
- Cash subsidy of Rs. 2 lakhs by DIPP for green buildings in NIMZ
- Fast track environment clearance by MNRE
- Concessional rate of interest by SIDBI for financing green buildings



Feasibility Compliance Study & Reporting

Our team carries out a detailed survey to assess the extent of applicability of green building standard with respect to the project and we tell the valid reason for the project to undertake green building certification.

The feasibility report includes findings which address points like which rating system to apply for, advisory on BOQ documents, prospective rating of the building, planning issues and suggestions and the criteria that will be attempted by the project team. Our feasibility study covers both technical and operational aspects to ensure that the investments do not add to the financial burden on he client's part and environmental burden on the society's part.

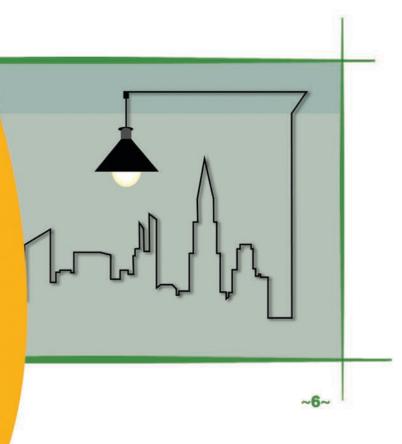


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Energy and Day lighting Simulations

Energy Efficiency is the most crucial module for any building in today's scenario. We provide the simulation services for energy and day lighting optimization for effective energy savings on ECOTECT, which is a useful tool for early design studies that quantify daylight factor and visualize light rays; and E-Quest, a software which performs detailed analysis of today's state-of-the-art building design technologies using today's most sophisticated building energy use simulation techniques.

> Precision and Accuracy are given primary importance while obtaining the results. This not only helps in design improvement but also supplements the comfort level of the occupants. These simulation reports are sometimes also the mandatory submissions for environmental clearances and accreditation. These simulations can save both time and resources which can now be utilized elsewhere.



Green Building Certification

The facilitation process for green building certifications involves the design, construction and operation of the project with a focus on site management, water and energy efficiency, usage of recyclable and regional materials, improving indoor environmental quality and optimizing the natural light penetration inside the building. We assist the project managers in reducing the ecological footprint of their project via certification. We deal in all the majorly prevalent green building rating systems nationally and internationally.

- IGBC
- GRIHA
- LEED
- WELL
- EDGE
- Green Star
- BREAM
- ESTIDAMA



IGBC

IGBC (Indian Green Building Council) is the second largest green building council in the world. IGBC has developed its exclusively designated rating systems for New Buildings, Existing Buildings, Green Homes, Schools, Factories, SEZs, Townships, Interiors and Residential Societies.

GRIHA

GRIHA (Green Rating for Integrated Habitat Assessment) is developed by TERI and is identified as the national rating system of India by MNRE. Many state governments incentivize the GRIHA Rated projects. With rising costs of fuel and energy and increasing awareness of connections between climate change and our life-styles there is a growing interest in the small residential development sector to adopt green measures. An easy to use and expedient way of designing green residences, resorts, motels and small offices is underway. With a Simple, Affordable and Versatile approach to green rating for small residences, SVA-GRIHA would be web enabled by giving universal access to information and guidelines on green buildings.



LEED

(Leadership in Energy and Environmental Design)

LEED is the pioneering rating system developed by USGBC and is widely used by residential and commercial buildings and neighborhoods. The existing structures can also be converted into a Green Building as per the specialized rating system. This not only enhances the performance of the building but also gives it a reputed status. LEED, or Leadership in Energy and Environmental Design, is changing the way we think about how buildings and communities are planned, constructed, maintained and operated. Leaders around the world have made LEED the most widely used third-party verification for green buildings, with around 1.85 million square feet being certified daily.

LEED works for all buildings from homes to corporate headquarters at all phases of development. Projects pursuing LEED certification earn points across several areas that address sustainability issues. Based on the number of points achieved, a project then receives one of four LEED rating levels: Certified, Silver, Gold and Platinum. LEED-certified buildings are resource efficient. They use less water and energy and reduce greenhouse gas emissions. As an added bonus, they save money.

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Green Building Audits

In this we audit the existing building structures, complexes, residential societies, co-operative housing societies, villages, campuses and all other elements of built environment as per the pre-defined norms and standards of the competent agencies and identify the loopholes in their operations and maintenance. Through this audit, we also help our clients in chalking a sustainability plan for their existing services along with the recommendations for major retrofitting or renovations if needed.



Research Projects for Schools and University Campuses

We also believe in giving back to the society in any manner possible, hence have comprehensive interests in providing quality training by means of academic and practical aid both, by conducting research projects at secondary and higher secondary levels in schools to indulge and enforce a greener and cleaner tomorrow from a very early life stage.

We understand the importance of inculcating sustainability values among the torch bearers of development in our nation. Hence, we initiate the research projects at school level to indulge students at various stages of green school concept. At the university level, the research project is designed to analyze the campus as a neighborhood with reference to LEED Neighborhood System.



Training for Green Building Credentials

Working in partnership with a global community of developers pooling in engineering and construction experience, unidirectional in their focus, towards bettering the environment as a whole and educating the coming generation of its findings and inferences, our team aims to provide intensive material towards professionals dedicated to a better and brighter tomorrow. In this highly competitive scenario of today, it is very important to have an edge over other participants in the same race. We provide academic guidance to the aspiring green building professionals who want to supplement their work experiences with nationally and internationally acclaimed Green Building Credentials.



RESPONSIBILITIES OF GREEN BUILDING CONSULTANT

- Project registration with the concerned rating authority
- BOQ vetting
- Feasibility Analysis
- Daylighting simulations
- Energy simulations
- Shading analysis (if required)
- Document compilation and submission for both Pre-Certification and Provisional
 Rating
- Virtual and actual meetings with the project team as and when required

WHERE WE STAND

METHODOLOGY

- In this project, we will survey, audit and analyze the school building on the basis of IGBC Green Schools Rating System V2014.
- The overall span of the project is 4 weeks including a weekly lecture on different modules of green building, and training on data collection.
 - 1st Week: Site analysis and water efficiency
 - · 2nd Week: Energy efficiency (detailed audit of school's electric fixtures)
 - 3rd Week: Indoor Environment Quality Assessment (detailed audit of classrooms and windows)
 - · 4th Week: Materials, Resources, Health ad Hygiene

OBJECTIVES

- To assess the operation and maintenance of existing school buildings
- To enable the eco-clubs about green building auditing
- To promote value based approach towards green building
- To reflect behavioral loop-holes in our lifestyle
- To estimate the scope of improvement that guides us towards sustainability

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Green Solarwale India Pvt. Ltd. 2057, Swarn Park Industrial Area Mundka, Delhi-110041 info@thesolarwale.com

www.thesolarwale.com Toll Free: 1800 1200 699

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