

Scheme on “Energy Efficient Solar/Green Buildings” - Achievements during 11th Plan

The Ministry has been implementing a Scheme on “Energy Efficient Solar/Green Buildings” since, February, 2009 which aims to promote the widespread construction of energy efficient solar/green buildings in the country through a combination of financial and promotional incentives mainly for exemption from registration cum rating fee for the government buildings for acquiring GRIHA ratings developed by TERI, capacity building, awareness and other promotional activities etc.

The major achievements made during the 11th Five Year Plan under the scheme are as follows:

- i) 97 building projects of Govt. with 3.05 million sq. m built-up area have been sanctioned for the exemption from the registration cum rating fees. These buildings are now at various stages of construction. This was in excess of the target set.
- ii) The implementation plan of the Ministry indicating that all the Ministries/Government Bodies/PSUs of Central Government would be informed to design and construct all new buildings as per requirements of at-least GRIHA 3 Star Rating and to make efforts to reach GRIHA 4 Star Rating, wherever site conditions so permit, was approved in a meeting Committee of Secretaries held on 17th December, 2009. Accordingly various Central Govt. Ministries/Departments/Public Sector Undertakings were informed to take action.
- iii) An independent registered society ADaRSH (Association for Development and Research for Sustainable Habitats) created and headed by TERI has been provided some financial support by the Ministry. This body works as GRIHA Secretariat.
- iv) About 148 capacity building programmes including Workshops for Evaluators and Trainers on GRIHA Ratings and awareness programmes on Green Buildings/GRIHA Ratings/Green Architecture were organized across the country by various technical institutions under the guidance of TERI.
- v) A GRIHA manual containing a set of five volumes has been prepared and published by TERI under the scheme.

GRIHA Rating System

The GRIHA Rating System contains 34 evaluation criteria with 100 points. These criteria have been categorized into **(i) Site Planning** including conservation and efficient utilization of resources, health and wellbeing during building planning and construction stage **(ii) Water Conservation** **(iii) Energy Efficiency** including energy embodied & construction and renewable energy **(iv) Waste Management** including waste minimization, segregation, storage, disposal and recovery of energy from waste and **(v) Environment** for good health and wellbeing. Additional criteria for innovative developments such as alternative transportation, environmental education enhanced accessibility for physically/mentally challenged are also awarded points. GRIHA has a 100-point system consisting of some core points, which are *mandatory* to be met while the rest are optional, which can be earned by complying with the commitment of the criterion for which the point is allocated. Different levels of rating (one star to five stars) are awarded based on the number of points earned. The minimum points required for rating is 50. Buildings scoring 50-60 points, 61-70 points, 71-80 and 81 – 90 points will get one star, two stars, three stars, and four stars, respectively. A building scoring 91-100 points will receive the maximum rating, which are five stars.

Out of these 100 points up to 8 points are earmarked for the renewable energy applications including upto 3 points for Solar Water Heating systems.