

Agenda - GRIHA Training Programme for Evaluators & Trainers

Date: July 21st, 22nd, 23rd, 2010

Venue: The Energy & Resources Institute (TERI), Darbari Seth Block, India Habitat Centre,
Lodhi Road, New Delhi – 110 003

1st Day

9.30 - 10.00	Inaugural Session	Vision of GRIHA	MNRE, TERI & ADaRSH
10.00 - 11.45	Session-1: Sustainable Site planning Presentation	Criterion 1 Site selection Criterion 2 Preserve and protect landscape during construction Criterion 3 Soil conservation (till post-construction) Criterion 4 Design to include existing site features Criterion 5 Reduce hard paving on-site and/or provide shaded hard paved surfaces. Criterion 7 Plan utilities efficiently and optimize on-site circulation efficiency Criterion 8 Provide minimum level of sanitation/safety facilities for construction workers Criterion 9 Reduce air pollution during construction	The session shall start with a detailed presentation on sustainable site planning criteria of GRIHA with examples. During the practical session, the participants shall be divided into multiple groups by the facilitator. A design problem shall be given to the groups. The group shall be required to carry out a sustainable site planning exercise based on the problem. 3D models and other scaled models for varied site features (trees, lights, utility corridors) shall be used to carry out the exercise. The group representative shall be required to make a presentation on the proposed scheme by the respective group. The facilitator shall evaluate each scheme and give a critique on the same.
11.45 - 12.00	Tea Break		
12.00 - 12.45	Exercise on site planning		
12.45 - 01.15	Presentation by participants		
01.15 - 01.30	Discussion of proposed scheme		
01.30 - 02.00	Lunch Break		
02.00 - 4.00	Session-2: Building Design Optimization Presentation	Criterion 13 Optimize building design to reduce conventional energy demand (part)	The second session on building design optimization shall focus on two broad parameters; namely the basics of solar passive building design and the quantitative analysis based on criterion-13 of GRIHA. This shall be followed by a detailed individual exercise on laptop computer. The exercise shall be based on the basic understanding of the criterion and the correct answer shall be discussed at the end of the session.
4.00 - 4.15	Tea Break		
4.15 - 4.45	Exercise on Building design optimization		
4.45 - 5.15	Presentation of answer by participants		
5.15 - 5.30	Final Answer Discussion		

2nd Day			
9.30 - 10.30	Session-3: Artificial Lighting Presentation	Criterion 13 Optimize building design to reduce conventional energy demand (part)	A detailed presentation on energy efficient artificial lighting design as per requirements of Criterion 13 shall be followed by software demonstration for artificial lighting. The presentation and demonstration shall be followed by hands-on exercise on the demonstrated software. An evaluation copy for the same shall be provided to the participants and the participant shall be required to carry out a design exercise on the respective criteria of GRIHA .
10.30 - 11.00	Exercise on Artificial lighting		
11.00 - 11.30	Software Demonstration		
11.30 - 11.45	Tea Break		
11.45 - 1.15	Session-4: Energy Performance Optimization Presentation	Criterion 14 Optimize energy performance of building within specified comfort limits	This session shall cover basics of thermal comfort analysis, HVAC design , energy optimization of building energy systems and requirements of GRIHA . Requirements of Energy Conservation Building Code 2007 shall also be covered. Demonstration of software tools that are used to estimate energy consumption in buildings and to optimize energy systems shall be done. Software tools used to predict thermal comfort in non air conditioned/naturally ventilated buildings shall also be demonstrated.
1.15 - 1.30	Q & A Session		
1.30 - 2.00	Lunch Break		
2.00 - 2.45	Exercise on Energy Performance Optimization	Criterion 14 Optimize energy performance of building within specified comfort limits	Hands on training on select demonstration software shall be given (limited scope)
2.45 - 3.45	Software Demonstration		
3.45 - 4.00	Tea Break		
4.00 - 5.00	Session-5: Renewable energy utilization	Criterion 6 Enhance outdoor-lighting system efficiency using renewable energy system, Criterion 18 Renewable energy utilization, Criterion 19 Renewable-energy-based hot water system	This session shall cover renewable energy applications in buildings. The facilitator shall present the applications through the specified criteria of GRIHA, with examples and exercises.
5.00 - 5.30	Q & A Session		

3rd Day			
9.30 - 10.30	Session-6: Water Management Presentation	Criterion 10 Reduce landscape water requirement Criterion 11 Reduce water use in the building Criterion 12 Efficient water use during construction	The facilitator shall give a detailed presentation on water related issues and solutions through GRIHA. The presentation shall focus on water management in building sector with examples from current green building projects of GRIHA.
10.30 - 10.45	Q & A Session		
10.45 - 11.45	Session-7: Wastewater Management Presentation	Criterion 20 Wastewater treatment, Criterion 21 Water recycle and reuse (including rainwater)	The facilitator shall discuss about the waste water related issues and solutions through GRIHA. A detailed presentation shall be made on waste water management systems and various technologies available in India with examples from current green building projects of GRIHA. At the end of the session a design exercise shall be conducted along with the Q & A.
11.45 - 12.00	Tea Break		
12.00 - 12.45	Session-8: Solid waste Management Presentation	Criterion 22 Reduction in waste during construction Criterion 23 Efficient waste segregation Criterion 24 Storage and disposal of wastes Criterion 25 Resource recovery from waste	This session comprises of detailed presentation on solid waste management systems and implications of GRIHA.
12.45 - 1.30	Exercise on water & waste water management		
1.30 - 2.00	Lunch Break		
2.00 - 2.30	Session-9: Sustainable Building Material & Construction Tech. Presentation	Criterion 15 Utilization of fly ash in building structure Criterion 16 Reduce volume, weight, and construction time by adopting efficient technologies Criterion 17 Use low-energy material in interiors	A detailed presentation shall be made on low energy building material and its implication in GRIHA with appropriate examples.
2.30 - 2.45	Q & A Session		

2.45 - 3.15	Session-10: Health, Wellbeing and Environmental Quality Presentation	Criterion 26 Use low-VOC paints/adhesives/sealants Criterion 27 Minimize ozone depleting substances Criterion 28 Ensure water quality Criterion 29 Acceptable outdoor and indoor noise levels Criterion 30 Tobacco and smoke control Criterion 31 Provide at least, the minimum level of accessibility for persons with disabilities Criterion 32 Energy audit and validation Criterion 33 Operation and maintenance Criterion 34 Innovation points	A detailed presentation shall be made on all other environmental aspects of building design, construction and operation and its implication in GRIHA with appropriate examples.
3.15 - 3.30	Q & A Session		
3.30 - 4.00	Session-11: Website Demonstration	GRIHA online interface	GRIHA online interface
4.00 - 4.15	Tea Break		
4.15 - 4.30	Open Discussion	Clarification of All Doubts	Clarification of All Doubts
4.30 - 5.30	Session-12: GRIHA TRAINER's EXAMINATION	One hour written test (Objective Type)	For the participant who are interested only for GRIHA trainer's certificate
5.30 - 6.15	Session-13: GRIHA EVALUATOR's EXAMINATION	Forty five minutes written test (Subjective Type)	For the participant who are also interested for GRIHA evaluator's certificate
6.15 - 6.30	Closing Session		