

Tentative Agenda - GRIHA Training Programme for Evaluators & Trainers

Date: 20th, 21st and 22nd May, 2015

Venue: Navi Mumbai Municipal Corporation- Headquarters, Knowledge Centre, 3rd floor, Sector- 15A, plot No. 1, CBD Belapur, Navi Mumbai-410614

1st Day - 20th May, 2015

09.30 - 10.00	Inaugural Session	Overview of GRIHA	GRIHA Council, TERI and Programme partners (MNRE and NMMC)
10:00 - 10:15	Tea Break		
10.15 - 12.00	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 optimise 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 in to 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. Scale 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.
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 Optimisation Presentation	Criterion 13 Optimise building design to reduce conventional energy demand (part 1)	The second session on building design optimisation 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. 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 optimisation		
4.45 - 5.15	Presentation of answer by participants		
5.15 - 5.30	Final Answer Discussion		



Ministry of New and Renewable
Energy, GoI



2nd Day – 21st May, 2015

9.30 – 11.00	Session-3: Water, wastewater and solid waste management Presentation		This session will cover the status of the resource and the need to conserve, recycle and reuse. It will also highlight the significance of resource recovery from waste.
11.00 - 11.15	Tea Break		
11.15 - 1.00	Session-4: Water, wastewater and solid waste management criteria presentation	<p>Criterion 10 Reduce landscape water requirement</p> <p>Criterion 11 Reduce water use in the building</p> <p>Criterion 12 Efficient water use during construction</p> <p>Criterion 20 Wastewater treatment</p> <p>Criterion 21 Water recycle and reuse (including rainwater)</p> <p>Criterion 22 Reduction in waste during construction</p> <p>Criterion 23 Efficient waste segregation</p> <p>Criterion 24 Storage and disposal of wastes</p> <p>Criterion 25 Resource recovery from waste</p>	<p>The facilitator shall give a detailed presentation on water related solutions through GRIHA. The presentation shall focus on water management in building sector with examples from current green building projects of GRIHA.</p> <p>It shall also discuss about the wastewater related 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.</p> <p>This session will also comprise of detailed presentation on solid waste management systems and implications of GRIHA.</p>
1.00 - 1.30	Lunch Break		
1.30-2.45	Session-5: Artificial Lighting Presentation Exercise on Artificial lighting	Criterion 13 Optimize building design to reduce conventional energy demand (part 1)	A detailed presentation on energy efficient artificial lighting design as per requirements of Criterion 13.
2.45-4.00	Session-6: Energy Performance Optimisation Presentation	Criterion 14 Optimise energy performance of building within specified comfort limits	This session shall cover basics of thermal comfort analysis, HVAC design, energy optimisation of building energy systems and requirements of GRIHA. Requirements of Energy Conservation Building Code 2007 shall also be covered.
4.00 – 4.45	Exercise on Energy Performance Optimisation	Criterion 14 Optimise energy performance of building within specified comfort limits	An individual exercise for the calculation of energy optimization and equipment efficiency will be carried out for more clarity.
4.45-5.00	Tea Break		
5.00 – 5.45	Session-7: Renewable energy utilization	<p>Criterion 6 Enhance outdoor-lighting system efficiency using renewable energy system,</p> <p>Criterion 18 Renewable energy utilisation,</p> <p>Criterion 19 Renewable-energy-based hot water system</p>	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.



Ministry of New and Renewable Energy, Govt.



3rd Day			
09.30 - 10.30	Session-6: Sustainable Building Material & Construction Tech. Presentation	Criterion 15 Utilisation 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.
10.30 - 10.45	Tea Break		
10.45-11.45	Session-7: Health, Wellbeing and Environmental Quality Presentation	Criterion 26 Use low-VOC paints/adhesives/sealants Criterion 27 Minimise 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.
11.45-12.00	Session-11: Website Demonstration	GRIHA online documentation tool.	Project Management and Documentation tool for GRIHA registered projects.
12.00-1.30	Revision time		
1.30 - 2.00	Lunch Break		
2.00 - 3.00	Session-13: GRIHA TRAINER's EXAMINATION	One hour written test (Objective Type)	For the participants who are interested in GRIHA trainer's certificate
3.00 - 3.15	Tea Break		
3.15 - 4.00	Session-14: GRIHA EVALUATOR's EXAMINATION	Forty five minutes written test (Subjective Type)	For the participants who are also interested in GRIHA evaluator's certificate
4.00 - 4.15	Distribution of participation certificate		

➤ The programme shall cover all the 34 criteria under GRIHA.



Ministry of New and Renewable
Energy, Govt.

