



International Seminar on

# **Cost-Effective, Energy Efficient & Ecologically Appropriate Building Materials & Technologies for Housing**

November 26, 2011

Conference Complex, Hall No. 8  
India International Trade Fair  
Pragati Maidan, New Delhi

Jointly Organised by:



**Building Materials & Technology Promotion Council**  
Ministry of Housing & Urban Poverty Alleviation  
Government of India



**Housing & Urban Development Corporation**  
Ministry of Housing & Urban Poverty Alleviation  
Government of India

*In collaboration with:*



**Asia Pacific Ministerial Conference on  
Housing and Urban Development (APMCHUD)**

**Also Visit Hall No. 5:**

## **HUDCO Build Tech 2011**

**An International Exhibition on Building Materials, Interiors, Technology and Services,  
Real Estate and Housing Finance including Energy Efficient Green Buildings  
from 14-27 November, 2011**



## BACKGROUND

Inadequate housing of desired quality and the deteriorating living conditions are threatening standards of health, safety and security for majority of population particularly in the low income segments. Growing trends of population and urbanisation on one hand and increasing number of displaced persons as a result of natural disasters in many regions on the other, are aggravating the shelter crisis highlighting the need for policies, programmes and solutions for a sustainable development of housing.

Despite the quantitative growth of the housing stock during the last few decades, there is still a huge backlog of housing units and there is imperative need for qualitative improvement. It has been observed during the last decade that the construction costs have been increasing at a pace 50 percent higher than the inflation rate thereby impacting adversely the affordability of housing by common people - particularly the economically weaker and lower income groups.

Shortage of low cost but durable building materials is one of the major hurdle in meeting the country's housing stock. There are many factors contributing to the shortage of building materials, one such factor being the declining availability and sharp increase in cost of traditionally used materials like cement, bricks, steel & wood, etc. The alternate building materials and construction technologies not only offer potential for environmental protection, employment generation and energy conservation but also are the best options to meet the rising demand of housing in the country. With about 26.53 million estimated housing shortages at the end of 11<sup>th</sup> Five Year Plan, 99 percent of which is for LIG and EWS group, use of cost effective, energy efficient and ecologically appropriate building materials and technologies has attained greater significance.

One of the important aspects to achieve affordability is to introduce appropriate cost-effective building materials & technologies suiting different geo-climatic regions and hazard proneness of the country. While cost-effectiveness is the prime concern; quality, durability, functional requirement, speed, environment-friendliness encompassing disaster resistance etc. have to be kept in mind while identifying technologies.

The construction sector is a major user of energy. Since energy is one of the most costly inputs to the construction industry and source of most of the polluting effects, improving energy efficiency is one of the most urgent tasks to be addressed. This calls for efficient use of energy intensive materials, greater use of low energy - intensive materials, improving the energy efficiency of production process, increasing the use of recycled and waste materials and applying low energy architectural design principles.

Another significant areas which has potential include man-made fibre composites, metal matrix composites and principles of surface engineering. All these emerging materials may not have immediate applications in building construction but do offer a number of property-advantages over conventional materials. They should, in near future, lead to designing of products with chosen performance and strength to match requirements of specific applications in buildings and infrastructure with cost effective options.

## OBJECTIVES

- To present Indian and global perspective on cost-effective, energy-efficient and ecologically appropriate building materials and housing technologies
- To present the state-of-the-art alternate technologies for building construction including precast factory made components
- To disseminate up-to-date information, knowledge and experience on design, production, certification and application of cost-effective and alternate building materials
- To present the perspective on status of low cost housing technologies from SAARC region.
- To promote and encourage adoption of appropriate and affordable technologies for cost-effective housing by various construction agencies.
- To identify the problems and prospects in promoting the cost effective housing and building construction and develop realistic technological options.
- To introspect the role of Building Centres in delivery of housing at grass-root level.



# TENTATIVE PROGRAMME

0930 – 1000 hrs	: Registration
1000 – 1040 hrs	: <b>Inaugural Session</b>
1040 – 1100 hrs	: <i>Tea / Coffee</i>
<b>Technical Session – I</b>	<b>Cost effective, Environment Friendly, Energy Efficient Building Materials &amp; Technologies</b>
1100 – 1110 hrs	: BMTPC's efforts in Promotion of Alternate Housing Technologies by <i>Dr. Shailesh Kr. Agrawal, Executive Director, BMTPC</i>
1110 – 1120 hrs	: HUDCO's efforts in Housing Technologies - Role of Building Centres by <i>Shri.R.K.Safaya, Executive Director (URP/DD/TRG), HUDCO</i>
1120 – 1130 hrs	: Waste Based Building Materials – Environment Friendly, Energy-Efficient Technology options for Housing by <i>Dr. B.V. Venkatarama Reddy, Professor, Centre for Sustainable Technologies, IISc, Bangalore</i>
1130 – 1140 hrs	: Prefabrication in Housing & Construction by <i>Dr. C.V.R. Murty, Professor IIT, Chennai</i>
1140 – 1150 hrs	: Bamboo Based Composites - The Green Building Materials for Housing & Construction by <i>Dr. C.N. Pandey, Director, IPIRTI, Bangalore</i>
1150 – 1200 hrs	: Energy Conservation and Zero Carbon Habitat by <i>Ms. Milli Majumdar, Director (SH), TERI</i>
1200 – 1210 hrs	: Flyash based Building Materials and Components by <i>Shri N. Kalidas, INSWAREB, Vishakhapatam</i>
<b>Technical Session – II</b>	<b>Emerging Technologies in Housing and Building Construction</b>
1210 – 1220 hrs	: Panel Building System by <i>M/s Ikhmas Jaya SDN, Malaysia</i>
1220 – 1230 hrs	: GFRG / Rapid Wall System by <i>M/s Rashtriya Chemical Fertilizer (RCF), Mumbai</i>
1230 – 1240 hrs	: RCC Panel Building System by <i>M/s Mooreliving Building Systems Holding, Newzealand</i>
1240 – 1250 hrs	: Monolithic Concrete Technology by <i>M/s Sintex Industries Ltd., Kallol</i>
1250 – 1300 hrs	: 3-S Panel Building System by <i>M/s B.G. Shirke Construction Technologies Pvt. Ltd., Pune</i>
1300 – 1310 hrs	: Technology using Expanded Steel Mesh Panels, Polystyrene Beads and Alleviated Concrete by <i>M/s J.K.Structures, U.K.</i>
1310 – 1400 hrs	: <i>Lunch</i>
<b>Technical Session – III</b>	<b>Field Level Application of Cost Effective Housing Technologies – Case Studies</b>
1400 – 1410 hrs	: Industrial Workers Housing Project at Bawana & Baprola by <i>DSIIDC</i>
1410 – 1420 hrs	: Commercial Housing Project using Alternate Housing Technologies at Chennai by <i>Shri P.K. Adlakha, Architect, New Delhi</i>
1420 – 1430 hrs	: Housing Project using Monolithic Concrete Technology by <i>Pimpri Chinchawad Municipal Corporation, Maharashtra</i>
1430 – 1440 hrs	: Housing Projects by <i>Rajeev Gandhi rural Housing Corporation, Bangalore</i>
1440 – 1450 hrs	: Country Presentation on Cost effective Housing Technologies from <i>Sri Lanka</i>
1450 – 1500 hrs	: Country Presentation on Cost effective Housing Technologies from <i>Bangladesh</i>
1500 – 1510 hrs	: Country Presentation on Cost effective Housing Technologies from <i>Nepal</i>
1510 – 1520 hrs	: Country Presentation on Cost effective Housing Technologies from <i>Bhutan</i>
1520 – 1530 hrs	: Country Presentation on Cost effective Housing Technologies from <i>Pakistan</i>
1530 – 1545 hrs	: <i>Tea / Coffee</i>
<b>Technical Session – IV</b>	<b>Efforts by Building Centres at Grass-root level in Promotion of Cost Effective Housing Technologies</b>
1545 – 1555 hrs	: Presentation by <i>Kerala State Nirmithi Kendra, Thiruvananthapuram, Kerala</i>
1555 – 1605 hrs	: Presentation by <i>Karnataka State Nirmithi Kendra, Bangalore, Karnataka</i>
1605 – 1615 hrs	: Presentation by <i>Awas Vikas Limited, Jaipur, Rajasthan</i>
1615 – 1625 hrs	: Presentation by <i>M/s Development Alternatives, New Delhi</i>
1625 – 1635 hrs	: Presentation by <i>Auroville Building Centre, Auroville, Tamil Nadu</i>
<b>Technical Session – V</b>	<b>Panel Discussion on Problems &amp; Prospects in Use of Cost Effective Technologies</b>
1635 – 1830 hrs.	: Panellists will include representatives of R&D and Academic Institutions, NGOs, Building Centres, leading Professionals and Public and Private Sector organisations
1830 hrs	: <i>High Tea</i>



## About BMTPC

BMTPC is an autonomous body under the aegis of the Ministry of Housing & Urban Poverty Alleviation, Government of India established in 1990. Since its inception, BMTPC has been working towards smooth transfer of home grown cost effective, energy-efficient, environment-friendly and disaster resistant building materials and construction technologies from lab to field.

### Major Areas of Work:

- **Building Materials & Construction Technologies :**  
To promote development, standardization, mechanization and large scale field application of proven innovative and emerging building materials and technologies in the construction sector.
- **Disaster Mitigation & Management :**  
Mainstreaming disaster risk reduction in housing, existing and developmental projects.
- **Capacity Building and Skill Development :**  
To work as a Training Resource Centre for capacity building and promotion of good construction practices to professionals, construction agencies, artisans and marketing of building technologies from lab to land.
- **Project Management & Consultancy :**  
To undertake project management and consultancy services encompassing DPR preparation, innovative design consultancy and vetting, appraisal, monitoring, quality assurance and third party inspection of housing projects under the various Central/State Schemes.

## About HUDCO

### Corporate Mission

To promote sustainable habitat development to enhance quality of life.

### Corporate Vision

To be among the world's leading knowledge hubs and financial facilitating organizations for habitat settlement.

The corporate plan of HUDCO envisages the organization to sustain its dominant position in the field of Housing and Urban Development while continuing to play a significant role in supporting social housing and utility infrastructure. Towards expanding its role in the sector, HUDCO plan to integrate itself along the complete project finance value chain and position itself as a sector expert in the identified areas. HUDCO over the years have developed significant experience in the field of consultancy, research and development as well as capacity building activities. HUDCO consultancy services in the areas of Urban and regional Planning through development of new town proposals including urban development strategies at state and district levels, Architecture, Landscape, Urban Design and Environmental Engineering in general and in particular weaker section housing, disaster rehabilitation, have achieved significant appreciation in the country. HUDCO has also taken up significant steps in promoting alternative building materials and technologies and green building concepts. HUDCO has also been laying emphasis upon development of building products from Agriculture and Industrial wastes.

## WHO SHOULD PARTICIPATE

The participants will include representatives from R&D and Academic Institutions, NGOs, Building Centres, Professionals, Manufacturers, Builders, Real Estate Consultants, Housing & Urban Development Authorities, public and private sector departments/agencies working in the area of housing and building construction.

## VENUE AND DATE

The International Seminar will be held on November 26, 2011 at :

**Conference Complex, Hall No. 8**  
India International Trade Fair  
Pragati Maidan, New Delhi

## CONTACT PERSONS:

### BMTPC

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### HUDCO

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