

ECBC/ ENS WORKSHOPS
& WEBINARS BRIEF
REPORT FOR SESSION
2021-22

ECBC & ENS Workshops/ Webinars Details – Session 2021-22

The description of ECBC & ENS awareness and training programmes carried out by ECBC/ ENS Cell from July' 2021 to July' 2022 Months are as follows:

S.N.	Date	Type of Training	Mode of Training Programme	Venue	No. of Registered Participants	Master Trainer/ Speaker
1	17.09.2021	Training A (1 day)	Online/ Webinar	Respective locations via webinar	103	Mr. Manoj Singh
2	21.09.2021	Training A (1 day)	Physical/ Workshop	Govt. PG College, Sector 1, Panchkula	49	Mr. Manoj Singh Mr. Anurag Bajpai
3	29.09.2021	Awareness (Half day)	Online/ Webinar	Respective locations via webinar	79	Mr. Ankur Tulsyan
4	14.10.2021	Awareness (Half day)	Online/ Webinar	Respective locations via webinar	41	Mr. Ankur Tulsyan
5	28.10.2021 29.10.2021	Training B (2 day)	Physical/ Workshop	Nirman Sadan, Sector: 33-A, Chandigarh	52	Mr. Manoj Singh Mr. Money Khanna
6	12.11.2021 13.11.2021	Training B (2 day)	Physical/ Workshop	Sushant University, Sector: 55, Gurugram	50	Mr. Anurag Bajpai Mr. Suhaas Mathur
7	30.11.2021	Awareness (Half day)	Online/ Webinar	Respective locations via webinar	55	Mr. Rana Pratap Poddar
8	28.12.2021 29.12.2021	Training B (2 day)	Online/ Webinar	Respective locations via webinar	56	Mr. Rana Pratap Poddar Mr. Abu Talha Farooqi
9	13.01.2022 14.01.2022	Training B (2 day)	Online/ Webinar	Respective locations via webinar	89	Ms. Mariyam Zakiah Mr. Rana Pratap Poddar
10	27.01.2022 28.01.2022	Training B (2 day)	Online/ Webinar	Respective locations via webinar	64	Mr. Manoj Singh Mr. Abu Talha Farooqi
11	17.02.2022 18.02.2022	Training B (2 day)	Physical	MM University (College of Architecture), Ambala	55	Mr. Money Khanna/ Mr. Manoj Singh Mr. Abu Talha Farooqi/ Ms. Mariyam Zakiah
12	28.02.2022	Awareness (Half day)	Physical	Hotel Shivalik View, Sector 17, Chandigarh	70	Mr. Anurag Bajpai
13	11.03.2022	Training A (1 day)	Online/ Webinar	Respective locations via webinar	71	Mr. Rana Pratap Poddar

14	12.04.2022	Awareness (Half day)	Physical/ Workshop	UIET, Kurukshetra	41	Mr. Abu Talha Farooqi
15	28.04.2022 29.04.2022	Training C (2 day)	Online/ Webinar	Respective locations via webinar	59	Mr. Rana Pratap Poddar Mr. Abu Talha Farooqi
16	12.05.2022 13.05.2022	Training C (2 day)	Online/ Webinar	Respective locations via webinar	47	Mr. Ankur Tulsyan Mr. Suhaas Mathur
17	10.06.2022	Awareness (Half day)	Physical/ Workshop	Govt. Polytechnic College (Nilokheri)	77	Mr. Money Khanna
18	30.06.2022 01.07.2022	Training C (2 day)	Physical/ Workshop	Zila Vikas Bhawan, Rohtak	60	Mr. Manoj Singh Mr. Ankur Tulsyan
19	12.07.2022 13.07.2022	Training C (2 day)	Physical/ Workshop	YMCA, Faridabad	52	Mr. Ankur Tulsyan Mr. Manoj Singh

Total number of participants attended the workshops/webinars during session 2021-22: 1170

Awareness and Training Program – 1

- **Training:** One day ECBC and ENS Training Program (Online)
- **Date:** 17th September 2021
- **ECBC Master Trainer:** Mr. Manoj Singh

In this One-day Webinar, Mr. Manoj Singh was invited as ECBC master trainer. He overviewed the Energy Conservation Building Code (ECBC) introduced by BEE, GoI. Further, he put light on the Eco Niwas Samhita (ENS) and its scope.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot displays a Zoom webinar interface. At the top, the host is identified as GreenTree Global. The main content area shows a slide titled "ECBC Compliance Approach" with the following text:

- To comply with the Code, buildings shall
 - have an Energy Performance Index Ratio (EPI Ratio) as defined in §3.1.1 that is less than or equal to 1
 - meet all mandatory requirements mentioned under §4.2, §5.2, §6.2, and §7.

The right-hand side of the interface shows a list of 42 participants, including Manoj Singh (Co-host), Abdus Salam Azad (Co-host), and other attendees. The bottom toolbar includes options for Join Audio, Start Video, Security, Participants (42), Polls, Share Screen, Reactions, More, and End.

Awareness and Training Program – 2

- **Training:** One day ECBC and ENS Training Program (Physical)
- **Date:** 21st September 2021
- **ECBC Master Trainer:** Mr. Manoj Singh, Mr. Anurag Bajpai

The ECBC & ENS awareness training programme was held at Govt. PG College, Sector 1, Panchkula.

In this One-day Workshop, Mr. Manoj Singh and Mr. Anurag Bajpai were invited as ECBC master trainers.

Mr. Abdus Salam Azad, ECBC Cell member, HAREDA welcomed all the officials from various departments who participated in the programme and the trainers of that day.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 3

- **Training:** Half-day ECBC and ENS Awareness Program (Online)
- **Date:** 29th September 2021
- **ECBC Master Trainer:** Mr. Ankur Tulsyan

In this Half Day Webinar, Mr. Ankur Tulsyan was invited as ECBC master trainer. He briefed about the Energy Conservation Building Code (ECBC) introduced by BEE, GoI. Further, he put light on the Eco Niwas Samhita (ENS) and its scope.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot displays a Zoom webinar interface. The main content area shows a presentation slide titled "Implementation and Enforcement (Contd.)" with the following table:

Tasks related to mainstream ECBC	Central Government	State Government	Local Bodies
4. ECBC Enforcement			
Institutionalize mechanisms for enforcement and compliance checking in UI/US & Electrical Inspectorate		State Electrical Inspectorate	UI/US
Set-up of robust Monitoring and Verification (M&V) system	BEE	SDA	ULBs

Below the table, it states: "Whether a particular project is ECBC-compliant or not can be verified at four different project stages:"

- **Stage 1:** While obtaining the construction permit from ULBs.
- **Stage 2:** At the time of obtaining construction completion/occupancy certificate from UI/US.
- **Stage 3:** While getting the electrical connection from State Electrical Inspectorate.
- **Stage 4:** At the time of review of annual energy consumption for two consecutive years by the State Electrical Inspectorate or State Designated Agency after the building has been fully operational.

The right-hand side of the interface shows a "Participants (36)" list with names and status icons. The name "Ankur Tulsyan" is highlighted in the list. The bottom toolbar includes icons for Unmute, Start Video, Security, Participants (36), Polls, Share Screen, Chat, More, and a red "Leave" button.

Awareness and Training Program – 4

- **Training:** Half-day ECBC and ENS Awareness Program (Online)
- **Date:** 14th October 2021
- **ECBC Master Trainer:** Mr. Ankur Tulsyan

In this Half Day Webinar, Mr. Ankur Tulsyan was invited as ECBC master trainer. He overviewed about both the Energy Conservation Building Code (ECBC) and Eco Niwas Samhita (ENS) codes.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot displays a Zoom meeting interface. The main content area shows a presentation slide titled "Scope of ECBC (Contd.)" with the following content:

- ✓ **Applicable Building Systems**
 - Building Envelope
 - Mechanical systems and equipment, including HVAC
 - Service hot water and pumping
 - Interior and exterior lighting
 - Electrical power and motors
- ✓ **Exceptions**
 - Buildings that do not use either electricity or fossil fuels
 - Equipment and portions of building systems that use energy primarily for manufacturing processes
 - Safety, Health and Environmental codes take precedence

The slide also features the GreenTree logo with the tagline "Define. Design. Deliver." and a copyright notice "©GreenTree Global".

On the right side, the "Participants (25)" list is visible, showing names and status icons (muted, video off, etc.). The names listed are: Abdus Salam Azad (Co-host, Me), GreenTree Global (Host), Rahul Rahul (Co-host), Ankur Tulsyan (Co-host), Niraj Khokhar, Rahul Kumar, Ankit Chhoker, Rakesh Dhiman, Jitender Sharma, Junior Engineer Junior Engineer, narender singh, and Er Ramesh Didan.

At the bottom of the interface, there are controls for Unmute, Start Video, Security, Participants (25), Polls, Share Screen, Chat, More, and a red Leave button.

Awareness and Training Program – 5

- **Training:** Two-day ECBC and ENS Awareness Program (Physical)
- **Date:** 28-29th October 2021
- **ECBC Master Trainer:** Mr. Manoj Singh, Mr. Money Khanna

The ECBC & ENS awareness training programme was held at Nirman Sadan, PWD & Architecture Department, Sector 33-A, Chandigarh.

In this One-day Workshop, Mr. Manoj Singh and Mr. Money Khanna were invited as ECBC master trainers.

Mr. Abdus Salam Azad, ECBC Cell member, HAREDA welcomed all the officials from various departments who participated in the programme and the trainers of that day.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 6

- **Training:** Two-day ECBC and ENS Awareness Program (Physical)
- **Date:** 12-13th November 2021
- **ECBC Master Trainer:** Mr. Anurag Bajpai, Mr. Suhaas Mathur

The two-day workshop was organized at Sushant University, Gurugram. Prof Col. Virendra Kumar Malik, Dean of School of Art and Architecture, was the Chief Guest in the programme, he also chaired the inaugural session.

In this Two-day Workshop, Mr. Anurag Bajpai and Mr. Suhaas Mathur were invited as ECBC master trainers.

Mr. Abdus Salam Azad, ECBC Cell member, HAREDA welcomed all the officials from various departments, architects from IIA Haryana Chapter, practicing engineers, etc., who participated in the programme and the trainers of that day.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





PRESS RELEASE

It was a successful program and attended by more than 50 participants on day one. The program was also covered by press as well, so that the awareness about ECBC and ENS reach to more common people.

‘भविष्य को ध्यान में रख अक्षय उर्जा के प्रयोग को बढ़ावा देना जरूरी’



गुरुग्राम में रविवार को अक्षय उर्जा के प्रति जागरूता और पर्यावरण संबंधी विषयों पर कार्यशाला में मौजूद प्रतिभागी।-हप

गुरुग्राम, 14 नवंबर (हप)

अक्षय उर्जा के प्रति जागरूता और पर्यावरण संबंधी विषयों को लेकर सुशांत यूनिवर्सिटी में दो दिवसीय कार्यशाला का आयोजन किया गया। इसमें विद्यार्थियों को आज की जरूरत और भविष्य को ध्यान में रखकर अक्षय उर्जा के इस्तेमाल पर ध्यान केंद्रित करने के बारे में विस्तार से बताया गया।

हरियाणा अक्षय ऊर्जा विकास एजेंसी (हरेडा) की ओर से आए विशेषज्ञों ने ऊर्जा संरक्षण भवन संहिता (ईसीबीसी) और इको निवास संहिता को बढ़ावा देने बारे में जानकारी दी। मास्टर ट्रेनर अनुराग बाजपेयी ने कहा कि इन दिनों पर्यावरण पूरे विश्व के लिए चिंता का

पर्याय बना हुआ है, ऐसे में भावी इंजीनियर्स व हित धारकों की जिम्मेदारी और बढ़ जाती है कि वे अपने प्रयासों से समाज में जागरूकता लाएं। इस दौरान आर्किटेक्ट्स, रियल एस्टेट डेवलपर्स और विषय विशेषज्ञों ने विषयों से संबंधित सवालों पर अपनी जिज्ञासाएं प्रगट की, जिनका मास्टर ट्रेनर्स ने जवाब देकर समाधान किया। उन्होंने कहा कि भारत अक्षय उर्जा के क्षेत्र में अनेक मील के पत्थर स्थापित कर चुका है। यदि भावी इंजीनियर्स व हित धारक इस दिशा में और काम करें तो निश्चित रूप से पर्यावरण संबंधी चिंताओं का समाधान खोजा जा सकता है। इस मौके मास्टर ट्रेनर सुहास माथुर व अब्दुल सलाम आजाद सहित कई मौजूद रहे।

Awareness and Training Program – 7

- **Training:** Half day ECBC and ENS Awareness Program (Online)
- **Date:** 30th November 2021
- **ECBC Master Trainer:** Mr. Rana Pratap Poddar

In this Half Day Webinar, Mr. Rana Pratap Poddar was invited as ECBC master trainer. He overviewed about both the Energy Conservation Building Code (ECBC) and Eco Niwas Samhita (ENS) codes.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot displays a Zoom webinar interface. The main window shows a presentation slide titled "Introduction of Eco-Niwas Samhita (PART-II)" by GreenTree. The slide content includes:

- ENS-CB2 is for code compliance and to provide the minimum requirements for building services, electro-mechanical and renewable energy systems for new residential buildings.
- The code applies to:
 - Residential buildings built on a plot area of 500 m².
 - Residential part of Mixed land-use building projects, built on a plot area of 500 m².
- The thermal transmittance of the building envelope (except roof) for cold climate shall comply with the maximum of 1.8 W/m²K.

The slide footer shows the date "2021-22" and the presenter's name "Rana Pratap Poddar".

On the right side, the "Participants (34)" list is visible, including:

- AS Abdus Salam Azad (Co-host, Me)
- GreenTree Global (Host)
- RP Rana Pratap Poddar (Co-host)
- SS SURINDER SINGH
- SS Sonia Sharma
- SS Sukhchain Singh
- AK Ashish Kumar Choudhury
- NB Naresh Bhakhar JE
- RH Rajesh Hooda PO
- PK PARDEEP KUMAR
- TS Tejwant Singh Brar
- SR Sumer Rathi

The bottom toolbar shows options like Unmute, Start Video, Security, Participants (34), Polls, Share Screen, Chat, More, and Leave.

Awareness and Training Program – 8

- **Training:** Two-day ECBC and ENS Training Program (Online)
- **Date:** 28-29th December 2021
- **ECBC Master Trainer:** Mr. Rana Pratap Poddar, Mr. Abu Talha Farooqi

In this two-day webinar, Mr. Rana Pratap Poddar and Mr. Abu Talha Farooqi were invited as ECBC master trainer. On day one, Mr. Rana Pratap Poddar introduced ECBC and also explained about the scope of code. On day two, Mr. Abu Talha Farooqi started with introduction of ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Purpose of Energy Conservation Building Code (ECBC)". The slide content is as follows:

You are viewing Rana Pratap Poddar's screen. REC View Options

Purpose of Energy Conservation Building Code (ECBC)

In accordance with section 14(p) of the Energy Conservation Act 2001 the purpose of the Energy Conservation Building Code (Code) is to provide minimum requirements for the energy-efficient design and construction of buildings.

The Code also provides two additional sets of incremental requirements for buildings to achieve enhanced levels of energy efficiency that go beyond the minimum requirements.

AGNIKRIDA

The participants list on the right shows 23 participants:

- Abdus (Co-host, Me)
- GreenTree Global (Host)
- Rana Pratap Poddar (Co-host)
- Ramesh Rana (Co-host)
- Sandeep kumar
- Monu Kumar
- Sandeep Singh
- Sonia Sharma
- Abhishek Chauhan
- Ram Charan
- Vijay Dalal
- Rahul Kumar

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Openable Window-to-Floor Area Ratio (WFR_{op})". The slide content is as follows:

You are viewing Abu Farooqi's screen. REC View Options

Openable Window-to-Floor Area Ratio (WFR_{op})

Climatic Zone	Minimum percentage (%) of WFR _{op}
Composite	12.50
Hot-Dry	10.00
Warm - Humid	16.66
Temperate	12.50
Cold	8.33

Bureau of Energy Efficiency, Ministry of Power, Government of India

The participants list on the right shows 29 participants:

- Abdus (Co-host, Me)
- GreenTree Global (Host)
- Kunal Verma
- Sandeep Singh
- Sonia Sharma
- Abu Farooqi
- Abhishek Chauhan
- Monu Kumar
- Manoj kumar
- Ram Charan
- Pankaj Sehrawat
- Janki Jagani

Awareness and Training Program – 9

- **Training:** Two-day ECBC and ENS Training Program (Online)
- **Date:** 13-14th January 2022
- **ECBC Master Trainer:** Ms. Mariyam Zakiah, Mr. Rana Pratap Poddar

In this two-day webinar, Ms. Mariyam Zakiah and Mr. Rana Pratap Poddar were invited as ECBC master trainer. On day one, Ms. Mariyam Zakiah briefed about the ECBC and also explained about the scope of code. On day two, Mr. Rana Pratap Poddar introduced ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot shows a Zoom meeting interface. The main content is a slide titled "ECBC requirements" with two tables. The first table is for "Opaque Assembly Maximum U-factor (W/m².K) Requirements for a ECBC compliant Building" and the second is for "Roof Assembly U-factor (W/m².K) Requirements for ECBC Compliant Building". The participant list on the right shows 38 participants, including GreenTree Global (Host), Mariyam Zakiah (Co-host), and others.

	Composite	Hot and dry	Warm and humid	Temperate	Cold
All building types, except below	0.40	0.40	0.40	0.55	0.34
No Star Hotel < 10,000 m ² AGA	0.63	0.63	0.63	0.63	0.40
Business < 10,000 m ² AGA	0.63	0.63	0.63	0.63	0.40
School < 10,000 m ² AGA	0.85	0.85	0.85	1.00	0.40

	Composite	Hot and dry	Warm and humid	Temperate	Cold
All building types, except below	0.33	0.33	0.33	0.33	0.28
School < 10,000 m ² AGA	0.47	0.47	0.47	0.47	0.33
Hospitality > 10,000 m ² AGA	0.20	0.20	0.20	0.20	0.20

The screenshot shows a Zoom meeting interface. The main content is a slide titled "Approach for reducing energy consumption in building" with a bar chart comparing "Business As Usual" (100%), "Passive Measures" (Orientation, WWR, glazing, Shading, Insulation, natural ventilation, daylight...), and "Active Measures" (Proper design and sizing of lighting and cooling system, high star rated equipment / appliance, assisted ventilation...). The participant list on the right shows 30 participants, including GreenTree Global (Host), Rana Pratap Poddar (Co-host), and others.

Approach	Energy Consumption
Business As Usual	100%
Passive Measures (Orientation, WWR, glazing, Shading, Insulation, natural ventilation, daylight...)	~70%
Active Measures (Proper design and sizing of lighting and cooling system, high star rated equipment / appliance, assisted ventilation...)	~50%

Awareness and Training Program – 10

- **Training:** Two-day ECBC and ENS Training Program (Online)
- **Date:** 27-28th January 2022
- **ECBC Master Trainer:** Mr. Manoj Singh, Mr. Abu Talha Farooqi

In this two-day webinar, Mr. Manoj Singh and Mr. Abu Talha Farooqi were invited as ECBC master trainer. On day one, Mr. Manoj Singh introduced ECBC and also explained about the scope of code. On day two, Mr. Abu Talha Farooqi started with the introduction of ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Heat Transfer" with a diagram of a house cross-section illustrating heat flow. The diagram labels various components like "stack effect", "vapor diffusion", "air infiltration", and "conduction". A small video window shows Manoj Singh. On the right, a "Participants (26)" list includes names like Abdus (Co-host, Me), GreenTree Global (Host), Manoj Singh (Co-host), Sachin Paul, Sonia Sharma, Gurunadha Rao, Abhishek Chauhan, chetna j, Gulshan Girdhar, Jaswinder Singh, Atma Ram, and Mukesh Kumar. The bottom toolbar shows options like Unmute, Start Video, Security, Participants, Polls, Share Screen, Chat, Record, More, and Leave.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Step 4: Residential envelope transmittance value (RETV) for building envelope (except roof)" with a sub-heading "Calculation of Term III". It includes a mathematical formula and a table with columns for Orientation, Component, (a) Area (m²), (b) Equivalent SHGC, (c) Orientation factor, and (a) x (b) x (c). A small video window shows Abu Farooqi. On the right, a "Participants (26)" list includes names like Abdus (Co-host, Me), GreenTree Global (Host), Abu Farooqi (Co-host), Vijay Dalal, AMANDEEP JOON, Sanjeev Kumar, Prof Resha Patil, Subhash Chand, Jolly Barooah, himanshu phogat, Ssunita Soni, and Manisha Thusu. The bottom toolbar shows options like Unmute, Start Video, Security, Participants, Polls, Share Screen, Chat, Record, More, and Leave.

Orientation	Component	(a) Area (m ²)	(b) Equivalent SHGC	(c) Orientation factor, ω	(a) x (b) x (c)
North	W1	35.62	0.523	0.659	12.38
North	W2-1	9.63	0.450	0.659	2.86
North	W2-2	9.63	0.450	0.659	2.86
North	W3-1	35.84	0.527	0.659	12.85
North	W3-2	35.84	0.527	0.659	12.85
South	W1	35.62	0.400	0.966	14.46
South	W2-1	9.63	0.363	0.966	3.38
South	W2-2	9.63	0.363	0.966	3.38
South	W3-1	35.84	0.486	0.966	16.83
South	W3-2	35.84	0.486	0.966	16.83
Term-III Total					97.4

Awareness and Training Program – 11

- **Training:** Two-day ECBC and ENS Training Program (Physical)
- **Date:** 17-18th February 2022
- **ECBC Master Trainer:** Mr. Money Khanna, Mr. Manoj Singh, Mr. Abu Talha Farooqi, Ms. Mariyam Zakiah

The two-day workshop was organized at College of Architecture, Maharishi Markandeshwar University Sadopur, Ambala. Prof. Aradhana Jindal, Principal of MM School of Architecture, was the Chief Guest in the programme, she also chaired the inaugural session. Sh. Rajinder Kumar, project officer, ADC office Ambala also attended the programme.

In this Two-day Workshop, Mr. Money Khanna, Mr. Manoj Singh, Mr. Abu Talha Farooqi and Ms. Mariyam Zakiah were invited as ECBC master trainers.

Mr. Abdus Salam Azad, ECBC Cell member, HAREDA welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainers of that day.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 12

- **Training:** Half day ECBC and ENS Awareness Program (Physical)
- **Date:** 28th February 2022
- **ECBC Master Trainer:** Mr. Anurag Bajpai

An awareness workshop on ECBC and ENS was organised at Hotel Shivalikview, Chandigarh. Mr. Saurav Diddi, Director, BEE was the Chief Guest and Dr. Hanif Qureshi, IPS, Secretary and Director General, NRE was the Guest of Honour of the programme. Mr. Shiv Dev Singh, Chairman, IIA Chandigarh Chapter, Mr. Sukumar Jeirath, Vice Chairman, IIA Panchkula Chapter, Mr. Surinder Bahga, Principal, Sakaar Foundation, Mr. P. K. Nautiyal, Technical Expert, HAREDA and Mr. Sukhchain Singh, Project Manager, HAREDA were also present in the programme.

In this half-day Workshop, Mr. Anurag Bajpai was invited as ECBC master trainer.

Ar. Surinder Bahga, President, FSAI moderated this programme and welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainers of that day.

The trainer then continued with the awareness program with an interactive session. The Trainer gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 13

- **Training:** One day ECBC and ENS Training Program (Online)
- **Date:** 11th March 2022
- **ECBC Master Trainer:** Mr. Rana Pratap Poddar

In this one-day webinar, Mr. Rana Pratap Poddar was invited as ECBC master trainer. Mr. Rana Pratap Poddar briefed about the ECBC and also explained about the scope of code. He also introduced ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot displays a Zoom webinar interface. The main content area shows a presentation slide titled "Techniques to reduce the energy demand of a building" with the following bullet points:

- Efficient building envelope design
- Adequate utilization of available daylight
- Use of efficient appliances like air conditioning system, lighting, etc.
- Timely maintenance of the electrical appliances
- Climate responsive building design

The slide also features the GreenTree logo and the tagline "Define. Design. Deliver." A small video window shows Mr. Rana Pratap Poddar. On the right side, a "Participants (39)" list is visible, including names like Abdus (Co-host, Me), GreenTree Global (Host), Rana Pratap Poddar (Co-host), Mithlesh Priya, Anurag Singh Bhadauria, Puneet Sharma, piyush pandey, Kuldeep Shrimal, Anjaneyulu Bendi, MUKESH KUMAR GUPTA, Ashish Sakhare, and Meghna Vij. The bottom toolbar includes icons for Unmute, Start Video, Security, Participants (39), Polls, Share Screen, More, and Leave.

Awareness and Training Program – 14

- **Training:** Half-day ECBC and ENS Awareness Program (Physical)
- **Date:** 12th April 2022
- **ECBC Master Trainer:** Mr. Abu Talha Farooqi

The one-day workshop was organized at College of Architecture, Maharishi Markandeshwar University Sadopur, Ambala. Prof. Vijay Kumar Garg, HoD Electrical Deptt., was invited as a Chief Guest in the programme.

In this one-day Workshop, Mr. Abu Talha Farooqi was invited as ECBC master trainers.

Mr. Rahul Chauhan and Mr. Ankur Patial, ECBC Cell member, HAREDA welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainers of that day.

The trainer then continued with the awareness program with an interactive session. The Trainer gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 15

- **Training:** Two-day ECBC and ENS Training Program (Online)
- **Date:** 28-29th April 2022
- **ECBC Master Trainer:** Mr. Rana Pratap Poddar, Mr. Abu Talha Farooqi

In this two-day webinar, Mr. Rana Pratap Poddar and Mr. Abu Talha Farooqi were invited as ECBC master trainer. On day one, Mr. Rana Pratap Poddar introduced ECBC and also explained about the scope of code. On day two, Mr. Abu Talha Farooqi started with introduction of ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot shows a Zoom meeting interface. The main content area displays a presentation slide titled "Commercial building Energy projection" with a bar chart and a table. The chart shows energy consumption in kWh/m² for different building types. The table below the chart provides data for various building types and energy sources.

Building Type	Energy Source	Energy Consumption (kWh/m ²)
Office Building	Grid	100
	Renewable	100
Retail Building	Grid	150
	Renewable	150
Hotel Building	Grid	200
	Renewable	200
Municipal Building	Grid	250
	Renewable	250
Industrial Building	Grid	300
	Renewable	300
Warehouse	Grid	350
	Renewable	350
Factory	Grid	400
	Renewable	400

The right sidebar shows a list of 32 participants, including co-hosts and various attendees. The bottom control bar shows options like Unmute, Start Video, Security, Participants (32), Polls, Share Screen, and More.

The screenshot shows a Zoom meeting interface. The main content area displays a presentation slide titled "Ways to reduce the energy demand of a building" with a list of four key strategies. The slide is attributed to the Bureau of Energy Efficiency, Ministry of Power, Government of India.

- Climate Responsive Building Design
- Efficient Building Envelope Design
- Energy Efficient Appliances (5 Star A/C, Fridge, LED Lights Etc)
- Proper Maintenance of Electrical Appliances

The right sidebar shows a list of 18 participants, including co-hosts and attendees. The bottom control bar shows options like Unmute, Start Video, Security, Participants (18), Polls, Share Screen, and More.

Awareness and Training Program – 16

- **Training:** Two-day ECBC and ENS Training Program (Online)
- **Date:** 12-13th May 2022
- **ECBC Master Trainer:** Mr. Ankur Tulsyan, Mr. Suhaas Mathur

In this two-day webinar, Mr. Ankur Tulsyan and Mr. Suhaas Mathur were invited as ECBC master trainer. On day one, Mr. Ankur Tulsyan introduced ECBC and also explained about the scope of code. On day two, Mr. Suhaas Mathur started with introduction of ENS and also explained about the scope of code.

The participants from various departments such as Housing board Haryana, HPHC, HSVP, UHBVN, were registered themselves and attended the webinar.

The participants were encouraged to ask questions and get their doubts clarified.

The participants responded to polls of poll launched at the end of the program and their feedback was recorded.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Sources for heat gain in a building" by Ankur Tulsyan. The slide features a cross-section diagram of a building with labels for "Unconditioned space", "Attic", "Conditioned space", "Conduction - Roof", and "Conduction - Walls". Below the diagram, it states "Building Envelope Design Is The Key Of Energy Efficient Residential Buildings" and "Bureau of Energy Efficiency, Ministry of Power, Government of India". The Zoom control bar at the bottom shows 33 participants. The participant list on the right includes names like Abdus (Co-host, Me), GreenTree Global (Host), Ankur Tulsyan (Co-host), and others.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "4.3.4.5 Building Envelope Trade off - Equation" by Suhaas Mathur. The slide contains mathematical equations for calculating the envelope performance factor (EPP_{total} and EPP_{envelope}). The equations are:

$$EPP_{total} = EPP_{roof} + EPP_{walls} + EPP_{fenest}$$

$$EPP_{envelope} = C_{wall, total} \sum_{i=1}^n U_i A_i + C_{wall, corner} \sum_{i=1}^n U_i A_i$$

$$EPP_{fenest} = C_{fenest, window} \sum_{i=1}^n U_i A_{wi} + C_{fenest, door} \sum_{i=1}^n U_i A_{di} + C_{fenest, skylight} \sum_{i=1}^n U_i A_{si} + C_{fenest, glass} \sum_{i=1}^n U_i A_{gi}$$
 The slide also includes logos for Energy Efficiency Improvements in Commercial Buildings and GEF. The Zoom control bar at the bottom shows 20 participants. The participant list on the right includes names like Abdus (Co-host, Me), GreenTree Global (Host), Suhaas Mathur (Co-host), and others.

Awareness and Training Program – 17

- **Training:** Half-day ECBC and ENS Awareness Program (Physical)
- **Date:** 10th June 2022
- **ECBC Master Trainer:** Mr. Money Khanna

The half-day workshop was organized at G.B.N. Govt. Polytechnic, Nilokheri, Karnal. Sh. Jwala Parsad, Principal of the G.B.N. Govt. Polytechnic, Nilokheri was the chief guest of the program.

In this half-day Workshop, Mr. Money Khanna was invited as ECBC master trainer.

Mr. Rahul Chauhan and Mr. Ankur Patial, ECBC Cell member, HAREDA welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainer of that day.

The officials from various departments such PWD B&R Karnal, HBH Karnal, HSIIDC, PHED Kaithal, Skill Development & Industrial Training Department Karnal, S.S. Education deptt. Karnal, Panchayati Raj Karnal, Irrigation dept. Panipat, practicing architects and engineers, etc. attended this workshop.

The trainer then continued with the awareness program with an interactive session. The Trainer gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 18

- **Training:** Two-day ECBC and ENS Training Program (Physical)
- **Date:** 30th June – 01st July 2022
- **ECBC Master Trainer:** Mr. Manoj Singh, Mr. Ankur Tulsyan

The two-day workshop was organized at Zila Vikas Bhawan, Rohtak. In this Two-day Workshop, Mr. Manoj Singh and Mr. Ankur Tulsyan were invited as ECBC master trainers.

Mr. Rahul Chauhan and Mr. Ankur Tulsyan, ECBC Cell member, HAREDA welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainers of that day.

The officials from various departments such as ADC-cum-CPO DNRE Bhiwani, Rohtak, PWD B&R Jhajjar, DHBVN, Housing board Rohtak, HPHC, HSVP, PHED Meham, UHBVN Bhalout, Solar department, CRID, Panchayati Raj, MSME deptt.Rohtak, etc., attended this workshop.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Awareness and Training Program – 19

- **Training:** Two-day ECBC and ENS Training Program (Physical)
- **Date:** 12th – 13th July 2022
- **ECBC Master Trainer:** Mr. Ankur Tulsyan, Mr. Manoj Singh,

The two-day workshop was organized in association with HAREDA and BEE at J.C. Bose University (YMCA), Faridabad. In this workshop, Dr. Jagdish Chaudhary, director of Balaji Educational institutions at Faridabad, was the Chief Guest of the programme.

In this two-day Workshop, Mr. Ankur Tulsyan and Mr. Manoj Singh were invited as ECBC master trainers.

Mr. Abdus Salam Azad, ECBC Cell member, HAREDA welcomed all the officials from various departments, practicing architects & engineers, etc., who participated in the programme and the trainers of that day.

The officials from various departments such as ADC-cum-CPO DNRE Faridabad, PWD B&R Faridabad, DHBVN, HSVP, PHED, practicing architects and engineers, etc. attended this workshop.

The trainers then continued with the awareness program with an interactive session. The Trainers gave an update on the state ECBC & ENS status and made the session very interesting.

The participants were provided with the state ECBC handbook, HAREDA schemes leaflet, spiral notepad and a pen in a folder.

The participants were encouraged to ask questions and get their doubts clarified.

Feedback from the participants was collected at the end of the programme.





Press Release

An overwhelming response was seen as the program was attended by more than 100 participants. The program was also covered by press as well, so that the awareness about ECBC and ENS reach to more common people.

WORKSHOP ON BUILDING CODES

Faridabad: To make students aware about Energy Conservation Building Codes (ECBC) and ECO Niwas Samhita (ENS) in the state, the Haryana Renewable Energy Development Agency (HAREDA), in association with the Bureau of Energy Efficiency (BEE), Government of India, and JC Bose University of Science and Technology, YMCA, organised a two-day awareness workshop. Dr Jagdeesh Chaudhary, director, Balaji Educational Institutions, laid emphasis on the need for energy conservation in buildings.

ऊर्जा संरक्षण बिल्डिंग कोड पर जागरूकता कार्यशाला का आयोजन

By Dinesh Bhardwaj - July 13, 2022

109 0



Faridabad Hindustan ab tak/Dinesh Bhardwaj :13

जुलाई। हरियाणा में ऊर्जा संरक्षण बिल्डिंग कोड (ईसीबीसी) और इको निवास संहिता (ईएनएस) को बढ़ावा देने के लिए हरियाणा अक्षय ऊर्जा विकास एजेंसी (हरेडा) द्वारा ऊर्जा दक्षता ब्यूरो (बीईई), भारत सरकार तथा जे.सी. बोस विज्ञान एवं प्रौद्योगिकी विश्वविद्यालय, वाईएमसीए, फरीदाबाद के सहयोग से दो दिवसीय जागरूकता कार्यशाला का आयोजन किया गया।

कार्यशाला के उद्घाटन सत्र में बालाजी शैक्षणिक संस्थानों के निदेशक डॉ. जगदीश चौधरी मुख्य अतिथि रहे। सत्र की अध्यक्षता विश्वविद्यालय के सिविल इंजीनियरिंग के विभागाध्यक्ष प्रो. तिलक राज ने की।

डॉ. चौधरी ने अपने संबोधन में भवनों में ऊर्जा संरक्षण की आवश्यकता पर बल दिया। श्री अंकुर तुलस्यान, निदेशक, ड्रीम स्पेस आर्किटेक्ट्स और श्री मनोज सिंह, सस्टेनेबिलिटी कंसल्टेंट, आईसीओएम दो दिवसीय कार्यशाला के दौरान विशेष वक्ता रहे। कार्यशाला के संयोजक एवं ईसीबीसी सेल, हरेडा के सदस्य श्री अब्दुस सलाम आजाद ने अतिथियों और प्रतिभागियों का स्वागत किया।

कार्यशाला में बताया गया कि ऊर्जा संरक्षण अधिनियम, 2001 के तहत देश में ऊर्जा संरक्षण भवन संहिता शुरू की गई है और यह 100 किलोवाट और उससे अधिक के कनेक्टेड लोड या 120 केवीए और उससे अधिक की अनुबंध मांग वाले सभी वाणिज्यिक भवनों पर लागू है। भवन क्षेत्र अर्थव्यवस्था के सबसे बढ़ते क्षेत्रों में से एक है और इसमें ऊर्जा कुशल भवन डिजाइन के माध्यम से ऊर्जा संरक्षण की काफी संभावनाएं हैं। ऊर्जा संरक्षण उपायों (ईसीएम) को लागू करके एक इमारत में लगभग 40 प्रतिशत ऊर्जा को बचाया जा सकता है। इसके अलावा, ऊर्जा दक्षता ब्यूरो ने इको निवास संहिता (ईएनएस) 2018 और 2021 भी प्रकाशित किया है, जो आवासीय भवनों पर लागू होता है। कार्यशाला में सरकारी विभागों के अधिकारी, पेशेवर आर्किटेक्ट, इंजीनियर, ऊर्जा पेशेवर और विश्वविद्यालय के संकाय सदस्य शामिल थे।

Regional Workshop On 'Energy Efficiency in Buildings Programme' – May' 2022

The New and Renewable Energy Department (NRE)/Haryana Renewable Energy Development Agency (HAREDA) in association with Bureau of Energy Efficiency (BEE) organized Two-Day Regional workshop on “Building Energy Efficiency Programme/ ECBC in States/ UTs” on 19th & 20th May 2022. Sh. Swatantar Kumar Singal, Chairman HAREDA was the Chief Guest of the program. Dr. Hanif Qureshi (IPS), Director General, HAREDA and Sh. Saurabh Diddi, Director Bureau of Energy Efficiency, were the Guest of honor of the programme. Sh. Ranjit Singh, Head, SDA Chandigarh, Sh. Balwan Singh Golen, Project Director, DNRE and Sh. P. K. Nautiyal, Technical Expert HAREDA and Sh. Sukhchain Singh, Project Manager HAREDA, Paramjit Singh, PEDA, Gurpreet Singh, SDA Chandigarh were present in the program along with representatives from state designated agencies of Jammu and Kashmir, Ladakh, Punjab, Himachal Pradesh, Chandigarh, Delhi & Haryana attended the workshop. ECBC Cell coordinated for the regional workshop held at Shivalikview hotel, Chandigarh.

S.No.	Date	Type of Training	Mode of Training Programme	Venue	No. of Registered Participants	Master Trainer/ Speaker
1	19.05.2022 20.05.2022	Regional Workshop (North)	Physical/ Workshop	Shivalikview hotel, Chandigarh	110 50	Mr. Saurabh Diddi Mr. Rajan Rawal







PRESS RELEASE

It was a successful program and attended by more than 100 participants. The program was also covered by press as well, so that the awareness about ECBC and ENS reach to more common people.

इमारतों में ऊर्जा दक्षता तथा राज्यों/ केंद्र शासित प्रदेशों में इसीबीसी पर क्षेत्रीय वर्कशॉप

चंडीगढ़ 22 मई (सतीश कुमार)न्यू एंड रिन्यूएबल एनर्जी डिपार्टमेंट/ हरेडा ने ब्यूरो ऑफ एनर्जी एफिशिएंसी के सहयोग से दो दिवसीय इमारतों में ऊर्जा दक्षता पर क्षेत्रीय वर्कशॉप का आयोजन शिवालिकव्यू होटल, में किया गया वर्कशॉप में स्वतंत्र कुमार सिंघल, चेयरमैन हरेडा, कार्यक्रम के मुख्य अतिथि के रूप में उपस्थित हुए। उन्होंने इमारतों में ऊर्जा संरक्षण पर जोर दिया। डॉ हनीफ कुरैशी (आईपीएस), डायरेक्टर जनरल हरेडा, ने ऊर्जा संरक्षण के महत्व पर चर्चा की। उन्होंने, भवनों में अक्षय ऊर्जा के एकीकरण के महत्व के बारे में, हरियाणा सरकार की पहल पर चर्चा की। सौरभ दीदी, डायरेक्टर ब्यूरो ऑफ एनर्जी एफिशिएंसी ने जलवायु परिवर्तन से जुड़े मुद्दों और कार्बन उत्सर्जन को कम करने के लिए किए जाने वाले उपायों को साझा किया। उन्होंने विभिन्न राज्यों के बीच ब्यूरो की पहल के बारे में भी जानकारी दी। आकांक्षा कृष्णन, सेक्टर विशेषज्ञ बीईई और श्रीमती मीनल आनंद, सेक्टर विशेषज्ञ बीईई ने भी विभिन्न राज्यों के बीच, इमारतों में ऊर्जा दक्षता का बढ़ावा देने के, ब्यूरो की पहल के बारे में भी जानकारी दी। राजन रावल, वरिष्ठ सलाहकार सीडीआरएफ, ने तकनीकी सत्र के दौरान इमारतों में एक्सटर्नल शेडिंग के महत्व पर एक प्रस्तुति दी। रंजीत सिंह, हेड, एसडीए चंडीगढ़, बलवान सिंह गोलेन, प्रोजेक्ट डायरेक्टर, डीएनआरई और पी के नौटियाल, टेक्निकल एक्सपर्ट हरेडा और सुखचैन सिंह, प्रोजेक्ट मैनेजर हरेडा, परमजीत सिंह, पेड़ा, गुरप्रीत सिंह, एसडीए चंडीगढ़, कार्यक्रम में मौजूद थे। कार्यशाला में जम्मू और कश्मीर, लद्दाख, पंजाब, हिमाचल प्रदेश, चंडीगढ़, दिल्ली और हरियाणा के प्रतिनिधि, इसीबीसी सेल मेम्बर्स और हरियाणा, पंजाब और चंडीगढ़ के विभिन्न सरकारी विभागों के अधिकारी भी कार्यक्रम में मौजूद थे।



THANK

YOU