



Confederation of Indian Industry

Event Dossier

of

Green Building Congress 2021



Theme:
'Net Zero – Buildings And Built Environment'

Premier Supporters

Brookfield Properties



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IGBC Performance Challenge 2021



IGBC Green Your School Programme 2021



IGBC Green Design Competition 2021



Principal Supporter



Ashfi India Glass Ltd.

IGBC's GREEN BUILDING CONGRESS 2021

Co-Principal Supporters



Platinum Supporters



Silver Supporters



Gold Supporters



LIBRARY

NETWORKING

CONFERENCE

EXHIBITION



AT A GLANCE



7,000+ Registered Attendees



80+ Speakers



55 Countries' Participation



55+ Exhibition Stalls



500+ Unique Products on Display at Expo

Exhibition Live till

17 Dec 2021

**MESSAGE FROM SHRI HARDEEP SINGH PURI,
MINISTER OF HOUSING AND URBAN AFFAIR, GOVERNMENT OF INDIA**

**हरदीप एस पुरी
HARDEEP S PURI**



सत्यमेव जयते



Message

आवासन और शहरी कार्य मंत्री
पेट्रोलियम एवं प्राकृतिक गैस मंत्री
भारत सरकार
Minister of
Housing and Urban Affairs; and
Petroleum and Natural Gas
Government of India

I am delighted to note that the 19th Edition of the IGBC Green Building Congress 2021 focuses on the theme of **Net Zero – Buildings and Built Environment**. In light of the recent commitments made by India at the COP-26 climate summit in Glasgow, I believe this is a highly relevant topic. I was also pleased to learn that the United Kingdom is a partner country for this edition of the Green Building Congress, and that the World Green Building Council and 14 other Green Building Councils across the globe are supporting this conference.

The Indian Green Building Council has been spearheading the Green Building Movement in India since 2001. Its role in augmenting green building footprint in the country has been exemplary. I am certain that this will play a key role in India's journey towards a green and sustainable economy. At the COP-26 summit, it was reassuring to see global leaders plan collaborative action to reduce the global carbon footprint. Our honourable Prime Minister, Shri Narendra Modi ji, led the way with his announcement of the "Panchamrit" (five-point) Action Plan which envisages India becoming a net-zero emissions country by 2070. This commitment reflects India's firm belief that the roadmap to prosperity lies in sustainability.

The Prime Minister also committed that by the end of this decade, India will meet 50 percent of its energy requirements from renewable energy; installed capacity of non-fossil-fuel energy in India will stand at 500 GW; emissions intensity of the country's GDP will drop by 45 percent from 2005 levels; and that its carbon emissions will be lower by one billion tons. I am confident that achieving these targets will enable India to build the necessary renewable energy infrastructure to meet the net-zero target.

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The Government of India realises that sustainable development is the only way forward to meet the twin goals of economic growth and combating climate change. Interventions for our urban areas will play a crucial role in the success of our initiatives as our cities are the engines of growth, while also being the most vulnerable to the detrimental effects of climate change.

The urban missions that the honourable Prime Minister launched in 2015 reflect the imperative to adopt green methods of infrastructure creation and service delivery. Not only is this urban renaissance the result of the most comprehensive planned urbanisation programme undertaken anywhere in the world, it is also globally acknowledged for its interweaving of urban reforms and sustainability. The Pradhan Mantri Awas Yojana – Urban is a shining example of this transformation. Most of the housing developed under the mission was done by utilising energy-efficient methods which incorporated advanced practices of land-use planning.

I am sure CII-IGBC's Mission on Net Zero, which was launched with the objective of achieving 'Net Zero Buildings by 2050', will have a massive impact on the built environment in the country. I am delighted to learn that more than 300 organisations from the Indian building sector have already committed to achieving Net Zero status for their buildings under this mission.

I convey my best wishes to the Green Building Congress 2021. I am certain that the deliberations in this Conference will enable the construction industry in building a greener and healthier India, and ultimately achieving the target of Net Zero.


(Hardeep S Puri)

New Delhi
12 November 2021

MESSAGE FROM SHRI DURGA SHANKER MISHRA, MINISTER OF HOUSING AND URBAN AFFAIR, GOVERNMENT OF INDIA

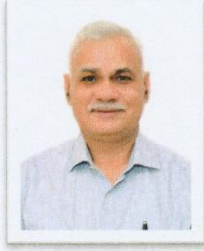
दुर्गा शंकर मिश्र
सचिव

Durga Shanker Mishra
Secretary

75
आजादी का
अमृत महोत्सव



भारत सरकार
आवासन और शहरी कार्य मंत्रालय
निर्माण भवन, नई दिल्ली-110011
Government of India
Ministry of Housing and Urban Affairs
Nirman Bhawan, New Delhi-110011



MESSAGE

I am glad to note that IGBC's Green Building Congress 2021 is being organised with the theme of 'Net Zero - Buildings and Built Environment'. This is in line with India's commitment at the COP26: India to become Net Zero in carbon emissions by 2070.

I am happy to learn that the World Green Building Council and 13 Country Green Building Councils are partnering with IGBC during this event. I understand UK is participating through its Department for International Trade, New Delhi.

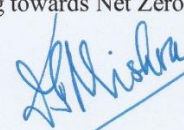
I am glad to know that IGBC has launched 'Mission on Net Zero', a journey to achieve Net Zero buildings by 2050 in all aspects i.e., Energy, Water, Waste & Carbon. Embracing Net Zero concepts is a win-win for all, including the organisations pursuing the path and the country.

I am sure IGBC's Mission on Net Zero would have far reaching impacts on built environment and contribute to the country's commitment towards achieving Net Zero emissions.

I appreciate the IGBC's Leadership and all the members & stakeholders, for their constant efforts towards addressing sustainability issues in the building sector.

Ministry of Housing & Urban Affairs would be happy to work with CII-IGBC and the stakeholders of the building sector, in marching towards Net Zero.

I wish the Green Building Congress a grand success!



(Durga Shanker Mishra)

New Delhi
15th November, 2021

Overwhelming participation from 4,000+ Students & Faculty across India !

IGBC Student Chapters Annual Meet 2021

17 November 2021, 1030 - 1330 Hrs



Seminar Halls



Online



Classrooms



Keynote Speaker



Prof Anil Sahasrabudhe
Chairman, All India Council for Technical Education (AICTE)



Mr V Suresh
Chairman
IGBC



Mr Gurmit Singh Arora
Vice-Chairman
IGBC



Dr C Velan
Chairman
IGBC Green
Education Committee



Mr Srikanth Bolla
Industrialist
Chairman and CEO at Bollant Industries

Topic: Emerging Engineering Solutions for Industry



Mr Ashwin Krishna
Head-Energy Efficiency
Promethean Energy Pvt. Ltd.

Topic: Zero Waste Lifestyle



Ms Sahar Mansoor
Founder
Bare Necessities

Session Moderators



Mr Vijaya Sai Meka
Chairman
IGBC Amaravathi Chapter



Mr M G Somashekar
Chairman
IGBC Mysore Chapter



IGBC



Partner Country



Supporting Partner



IGBC's GREEN BUILDING CONGRESS 2021

18 - 20 November 2021 : CII HIVE DIGITAL PLATFORM

Day 1 : Inaugural Session

CII's IGBC Green Building Congress 2021 starts on a strong note with the Chief Guest **H.E. Mr Alex Ellis**, British High Commissioner to India., inaugurating the conclave and gracing the event along with eminent dignitaries from Government of India, delegates from 18 participating Green Building Councils, International delegates, Supporting Associations and Partners, 75+ eminent speakers, along with 7000+ delegates. The session witnessed the message from eminent dignitaries from Government of India.



H.E. Mr Alex Ellis, British High Commissioner to India, spoke on how the world should shift gears and set on the path of NetZero. He congratulated IGBC on organising such an important event with a theme of 'NetZero - Buildings and Built Environment' and assured that the UK government will be delighted to support India in reaching the goal. He emphasized on the importance of having the right policies, standards, technology, and mindset to create a better future

Mr Jamshyd N Godrej, Past President CII & Chairman, CII-Sohrabji Godrej Green Business Centre, emphasized on the importance of respecting nature and how the on-going pandemic is a reminder to create greener, environmentally conscious and healthier developments. **Mr. Godrej** highlighted IGBC efforts in reaching out to all stakeholders and drive the green agenda in the nation. He suggested that India should aim at achieving a "Net Zero Energy" status before the timelines committed at the COP26.



Mr V Suresh, Chairman, CII's Indian Green Building Council at the Green Building Congress 2021 delivered the theme address, in which he highlighted the progress of India's Green Building Movement and on various new commitments taken by IGBC to facilitate a greener and cleaner India. He also registered that IGBC is reaching out to Tier 2 and rural areas with the help of 28 chapters nationwide.



IGBC Green Design Competition 2021 Winner felicitation!

Mr. M Anand, Principal Counsellor, CII - Indian Green Building Council (IGBC), announced the winners of the 15th Edition of IGBC Green Design Competition supported by Daikin Airconditioning India. Congratulation to the winners of IGBC Green Design Competition 2021.



Mr. Gurmit Singh Arora, Vice-Chairman IGBC gave his concluding remarks and thanked the dignitaries for their presence. He urged the participants to join the green building movement and stated "Let us be the change together!"

Special Plenary Session: Climate Change and Preparedness towards NetZero

The first session of the GBC 2021 addressed Climate Change and Preparedness towards NetZero. **Mr Jamshyd N Godrej**, Chairman, CII-Sohrabji Godrej Green Business Centre, moderated the session and shared his views on how and why India should proceed diligently towards sustainability. He proposed introduction of sustainability cost in the Indian Budget.

Shri Jayant Sinha, Member of Parliament, Former Minister of State for Finance & Minister of State for Civil Aviation, Government of India, congratulated CII-IGBC and Mr Godrej for their contribution in creating cleaner and greener environments. **Shri Jayant Sinha**, on behalf of the Govt. of India, shared important insights on how India is planning to work towards its NetZero energy vision, the need for technology and information sharing between countries, and on how the

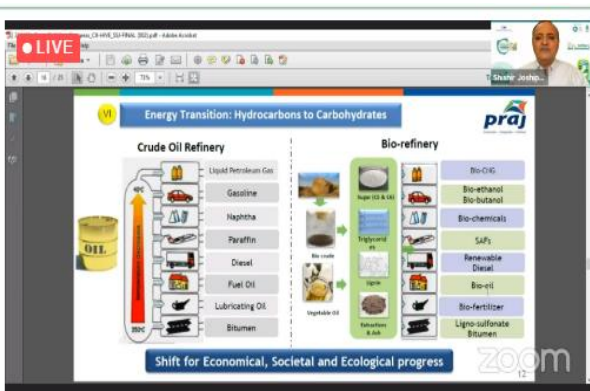
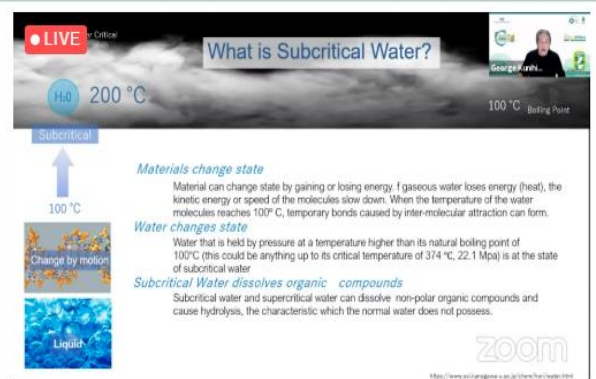
private sector will play a crucial role in helping achieve the NetZero goals.

He also assured the audience that the government has prepared a credible road map, is working on building institutional capacity, and will have a constitutional committee for the NetZero vision. He mentioned that they will allot a national and state budget for the same, after which they will stringently monitor, track and levy penalties for non-compliance. **Shri Jayant Sinha** concluded by saying that if we all work together towards the solution then India can not only achieve NetZero Energy status by 2070, but can aspire to turn Net Energy Positive as well.



Master Speaker Session: Alternative Energy options for the Future

Ar. George Kunihiro, Chairman, T-Life Environmental Lab Co. Ltd. & Professor, Kokushikan University, Tokyo, spoke on the topic of stats of Energy from Waste for the Cities of Future. He started off with stats of waste generated globally and introduced to the Sub Critical Waste Water Treatment as a way forward to tackle the waste and generate energy out of it. He explained the functioning and detailed process of the ALIN system and how it generates energy from waste water by converting it into subcritical water.



Mr. Shishir Joshipura, Managing Director & CEO, Praj Industries Ltd, presented on Bioenergy & Biofuels. He spoke on India's growth challenges and how climate change is impacting global population. He focused on emissions from transportation, mobility related emissions and how Bio-economy is the solution for addressing the challenge. He further compared conventional and bio-mobility with a transition roadmap involving ethanol production and blending.

Moderators **Dr Hariharan** & **Mr Jaimni** posed questions from audience on the IRR of ALIN technology and scaling up biogas based economy and its share in Indian ecosystem. They concluded the session with their thoughts on converting the waste to a fuel based economy and scope for collaboration. They thanked the speakers for introducing to the technological advancements in converting waste to energy and how it can address the emissions



Master Speaker Session: WorldGBC Global Project: Advancing NetZero



Mr Matthew Black, Project Coordinator - Advancing Net Zero, WorldGBC shared details of various Net Zero Initiatives in Green Building councils across the World. **Mr. Matthew Black** elaborated on WorldGBC's role and responsibilities to help all partnering nations in addressing climate change and Global Warming. He emphasised on the importance of focusing on both NetZero initiatives for buildings and Health & Well-being for Occupants.



Dr Christine Lemaire, Chief Executive Officer, German Sustainable Building Council (DGNB) graced the event to share insights on Lifecycle Approach in Building Industry. **Dr. Christine Lemaire** elaborated on the importance of a cradle-to-cradle approach and shared the rich experience of German Sustainable Building Council on approach NetZero Energy and Carbon.

The session was moderated by **Mr. Gurmit Singh Arora**, Vice Chairman IGBC and **Mr. S Raghupathy**, Principal Advisor, CII and Past Board Member of WorldGBC.

Members Session Indian Healthcare Sector - Access to All

Dr. Devi Prasad Shetty, Founder, Chairman, and Senior Consultant Cardiac Surgeon at Narayana Health addressed the 19th Green Building Congress 2021. He highlighted the significant aspects of affordable healthcare and the value it can bring to the Indian economy. He said that the healthcare sector would drive the 21st century and India must start training more doctors and nurses. He also emphasized that India must relook at the concepts and philosophy of affordable healthcare and concentrate more on maternal mortality and infant mortality.

In the presence of Chief Guest **Dr Devi Prasad Shetty's**, **Mr V Suresh** and **Gurmit Singh Arora** released the IGBC Annual Review 2020 – 21. **Dr Devi Prasad Shetty's** address was followed by IGBC Fellowship Awards.



IGBC FOUNDING MEMBERSHIP AWARDS 2021



Master Speaker Session Action towards Net Zero Buildings

The session was excellently moderated by **Mr. Syed Mohamed Beary**, Chairman, IGBC - Bangalore Chapter and **Ar B. R. Ajit** Chairman, IGBC – Cochin Chapter.

Mr. Mike Ellis Executive Vice President, Chief Customer & Digital Officer, Johnson Controls, presented on 'Trends and Technologies in Net Zero Buildings'. Key highlights were Occupant experience, Business Productivity, ESG score and De-carbonization will accelerate the focus on Resilience, Health and Sustainability. Convergence of Digital technology and Net Zero will enable the three levers of action - Greening by technology, Greening of technology and Carbon Transparency. Smart and Green buildings have significant impact on the occupants and has yielded lower response time in Hospitals, reduced inventory cost in Retail, greater cognitive attention in Educational Institutes and greater rental yield in Residential sector.

Mr. Vincent Martinez, Hon. AIA, President and COO, Architecture 2030, presented on 'Actions for Zero Carbon Buildings'. A brief synopsis is as follows: Importance of keeping 1.5-degree Celsius goal active and the current status of world which is way beyond 400 GT of CO2. Waiting until 2050 to achieve zero emissions means giving up the 1.5-degree Celsius goal altogether.



THANK YOU SUPPORTERS

Partner Country 		Premier Supporters 			
Performance Challenge 2021 	IGBC Green Your School Programme 2021 	IGBC Green Design Competition 2021 	Principal Supporter <p>Asahi India Glass Ltd.</p>		
Co-Principal Supporters					
Platinum Supporters 			Gold Supporters 		
Silver Supporters 			Supporting Organisations 		

Virtual Expo on Green Building Products & Technologies LIVE on CII HIVE from 18 November – 17 December 2021



DAY 2 : Master Speaker Session

Green Cities of the Future

The session was moderated by **Ar Srinivas Murthy**, Member, IGBC Hyderabad Chapter and **Mr Sameer Sinha**, Chairman, IGBC Ahmedabad Chapter. They highlighted the need of sustainable Urbanisation and solving the biggest challenges of urban sprawl, water, energy and other resources.

Dr. Andreas Binkert, Partner, Nuesch Development & President of 2000 Watts Smart Cities Association, Switzerland, stated that our cities have become major energy and resource guzzlers. He suggested that cities should be planned to improve the quality of life of its occupants, while conserving resources and reducing the negative impacts towards the environment. He emphasised on the importance of resource and technology sharing between nations to achieve this.

What is the Smart Solution to the Cities' Problems?

- Developed cities must drastically reduce their footprint whilst increasing quality of life
- Developing cities shall be given the chance to prosper without excessively emitting climate gases
- Man-made CO2 must be reduced globally to ZERO by 2050
- 2000-Watt Smart Cities pave the reduction path to smart and sustainable living

Energy use, Emission and Water

Industrial production, Residential, Commercial, Public, Transport

Ar. Andreas Binkert

NSLER CITIES CLIMATE CHALLENGE (GC3)

EMBODED CARBON (MAKING BUILDINGS)

- MINERAL EXTRACTION
- RAW MATERIAL MANUFACTURING
- TRANSPORTATION
- ELECTRICITY CONSTRUCTION

OPERATING CARBON (USING BUILDINGS)

- LIGHTING
- VENTILATION
- HEATING
- COOLING
- WATER HEATING
- COOKING
- REFRIGERATION
- PROCESS LOADS
- PLUG LOADS

CARBON OFFSETS

- RENEWABLE ENERGY PRODUCTION
- CARBON SEQUESTRATION

TOTAL NET CARBON IMPACT

Ar. EeTiong Lim

Ar EeTiong Lim, Studio Director, Gensler, Singapore spoke on Creating Sustainable Community in Cities. He stated that addressing the climate crises is more urgent than ever and that together we can create an era of global wellness. He introduced the Gensler Cities Climate Challenge and spoke on strategies to adopt for climate resilience

Ar. Ratish Nanda, CEO of Aga Khan Trust for Culture India, gave his insights on Conserving Heritage Precincts: Towards making of Sustainable Cities. He elaborated on how heritage conservation can support climate action and adopt concepts of sustainability. He touched upon topics such as zero waste construction, reusing materials on site, adopting vernacular designs, traditional technics, and local material.

CONSERVING HERITAGE PRECINCTS
Towards making of Sustainable Cities

Ar. Ratish Nanda

AGA KHAN TRUST FOR CULTURE

LIVE

Ar. Ratish Nanda

Andreas Binkert

EeTiong Lim-Gensler

Srinivas Murthy

14th Edition IGBC's GREEN BUILDING CONGRESS 2021
18-20 NOVEMBER 2021 CII HIVE Digital Events Platform
INDIA'S LEADING CONFERENCE & EXPO ON GREEN BUILT ENVIRONMENT / VIRTUAL

Panel Discussion - India@75 to India@100 : Vision towards India Emerging as a Leader in Green Built Environment

The session was excellently moderated by **Mr V Suresh**, Chairman - IGBC and **Mr K Sriram**, Chairman - IGBC Skill Development Committee.

The panelists were as follows:

- **Mr Mukesh Chandra**, Assistant Vice President - Facility Management, Brookfield Properties
- **Mr. Anup Mathew**, Senior Vice President & Business Head - Godrej Construction
- **Mr Sanjay Goyal**, Director & Sr. Vice President, Daikin Airconditioning India Pvt. Ltd.
- **Mr Ajay Koshy**, Head- Design Management, Brigade Group
- **Mr. Raju Goyal**, Chief Technology Officer, Ultratech Cement Limited
- **Mr. Biswajit Ghosh**, Chief of Technology, Tata Steel Limited
- **Dr Cary Chan**, Chair- WorldGBC Asia Pacific Network & Executive Director of Hong Kong Green Building
- **Mr. Sanjay Joshi**, Addl Senior General Manager, HDFC Ltd



The key takeaways from the Panel discussion are as follows:

- Increased focus on passive architecture will consolidate India's position in the Net Zero race.
- India should become self-sufficient and also export green and energy efficient products to Asia.
- Central and State government with the help of local bodies should implement uniform policies across the country to enable Green Buildings and Net Zero Buildings to various sectors in the industry.
- Increased government interaction and incentives towards green and energy efficient equipment will yield better results and facilitate India to reach its Net Zero target.
- India with an integrated and holistic approach towards Green Buildings and Net Zero Buildings can emerge as a leader in Green Built Environment.
- MoU between IGBC and HDFC has laid a solid road for India to reach greater heights in Green Financing.
- Awareness programs on Green Buildings and Net Zero Energy Buildings among small scale developers shall cover a larger segment of the total Building Sector.
- IGBC is the only platform that can enable all the stakeholders to adopt Net Zero.

Technical Session: Ecosystem for Net Zero

The session was moderated by **Ar. Ashok Mokha**, Chair, IGBC Nagpur Chapter and **Ms. Mala Singh**, Co-Chair, IGBC Mumbai Chapter. They started the session by speaking on importance of awareness and outreach, demonstration of net-zero, right policies from the govt and incentive to popularise NetZero in India.



Dr. Sid Pourfalah, Founder & CEO, Concrete4change, introduced the innovative Concrete 4 Change technology in reducing concrete's CO2 footprint. He shared that their technology makes concrete 70% cheaper and 100% greener. He was joined by this colleague **Mr. Michael Wise**.

Mr Murari Sinhal, Sr Group Vice President, Reliance Industries Limited, presented his insights on Green Energy Solution for future. He shared in detail Reliance Industries Limited's road map and plans for equipping India to reach its NetZero goals. He mentioned that RIL has taken up the responsibility to prepare the country to take up energy from renewable sources and hydrogen systems.



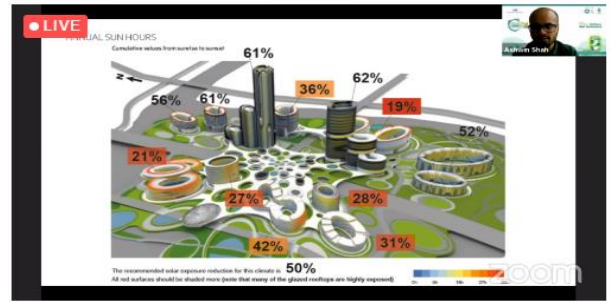
Mr Bagath Singh, Head Product Management, Blue Star Limited, presented on aspects of Efficiency Improvements in Air Conditioning for a NetZero World. With his rich experience and expertise in the subject, **Mr. Bagath Singh** captivated the audience and shared important insights on Reducing energy consumption in building, improving the efficiency of systems and the way forward towards a NetZero future.

Partner Country Session – UK : Build Back Greener-Unlocking Green Supply Chain in Construction Industry

Ar Sheetal Rakheja, Chairperson, IGBC - Delhi Chapter & **Dr. Ar. Poorva Keskar**, Co-Chairperson, IGBC – Pune Chapter, moderated the the session wherein they started off with their remarks on how the session was curated in a sequence of topics that follow construction flow in building projects with focus on embodied and operation carbon emission setting the tone .

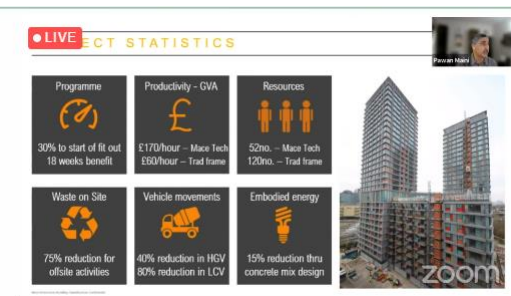


Mr Ashwin Shah, Associate, Zaha Hadid Architects, spoke on Importance of Design and Master planning for a Netzero Built Environment. He explained the topic through a case study of a master plan and how it evolved overtime through a game theory application and was analysed for various aspects of design such as population hotspots, placement of offices and residential areas, entrance and signages etc.



Mr Gary Wilburn, MD, EP Projects Ltd, presented on Retrofit and NetZero challenges- with case studies including Fawley Waterside Project. He spoke on retrofitting projects implemented by their organization and how regenerative approach enables the projects in achieving net zero.

Mr Alain Waha, CTO, Buro Happold & **Mr. Duncan Price**, Partner and Global Lead for Sustainability and Climate Change, Buro Happold, jointly presented on Digital Project Management practices to achieve Netzero Buildings and Built Environment. They spoke from their perspective as enablers focusing on passive design in tropical climate, Net Zero Carbon buildings and their management process. They also presented case studies on Life cycle carbon analysis, operational carbon and ways to minimize it.



Mr Pawan Maini, Regional Director, India, Mace, presented on Modern Methods of Construction and Offsite Construction. In his presentation, he elaborated on how modern methods of construction are more efficient and have reduced impact on the environment. He also spoke about inculcation of Just in time techniques in the construction industry and case studies of multi storeyed structures being constructed in lesser time through precast construction projects

Mr. Emre Yontem, Chief Technology Officer, Ecowise, presented on Importance of Innovation and Technology for NetZero. He spoke at length on how decarbonisation can be achieved through digital modelling and that digital modelling is a living replica of the building operation.



Moderators **Ar Sheetal Rakheja** & **Dr. Ar. Poorva Keskar** posed questions from audience on game theory design and analysis, data driven design, comparison retrofit and new construction, smart product management for reducing carbon footprint, offsite construction data analytics and digital management in construction industry etc. They concluded session by thanking the speakers for their constructive presentations and audience for their active participation.

Technical Session: Advances in Green Building Materials

Mr C Shekar Reddy, Chairman, IGBC - Hyderabad Chapter, moderated the session wherein emphasized on the requirement on green products and how making it mandatory at industrial level will have great positive impact overall. Targeting the manufacturers in building industry can cover a large group and hence reducing the cost of the product. Jayprakash Shroff Chairman, IGBC – Pune Chapter posed questions from audience on sustainable products and green building applications to the speakers.



Lowest Carbon Footprint - Blended Cement

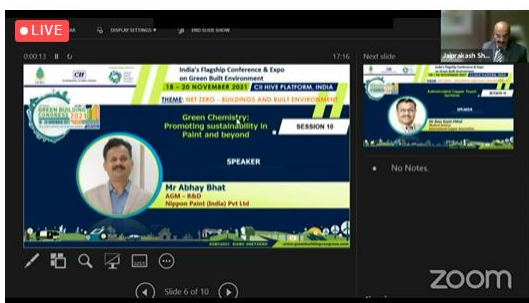
Products	CO ₂ Emission (in kg/ per MT Cement)	Percentage CO ₂ Emission Reduction by using Composite and PPC over OPC	Percentage CO ₂ Emission Reduction by using Composite and PPC over PPC
Ordinary Portland Cement (OPC 43 or 53)	820 ¹⁾		
Dalmia InfraPro - Portland Pozzolana Cement (PPC)	600	27%	
Dalmia InfraPro - Composite Cement (CC)	360	56%	40%

Source: CII Report 2016, Discussion Paper on Composite Cement

Dr Sujit Ghosh, Executive Director & Executive Council Member, Dalmia Cement (Bharat) Ltd., spoke on presented on “Grey is The New Green”- Paving the way for the carbon negative cement industry. He explained how Policy support and customer acceptance can make cement industry planet friendly making the journey from grey to green. He further spoke on environment friendly cement alternatives with

lower carbon emissions. He emphasized on Dalmia’s commitment for a carbon negative future by 2040 and how they are the first cement company to join Business Ambition for 1.5 degree

Mr. Shailesh Ranjan, Head - Business Planning, Operations & Technical, Asahi India Glass Limited, presented on Sustainable Glazing Solutions and how glass contributes in saving energy. He touched upon varied aspects of glass like high performance glazing glass/ coated glasses, their contribution in optimal day light, Thermal comfort etc. and they contribute in saving 10-15% of energy load in a building through various case studies



Mr. Abhay Bhat, AGM (R & D), Nippon Paint India Pvt Ltd presented on Green Chemistry: Promoting sustainability in Paint and beyond. He described about various chemicals and gasses are released from paints, furniture, glue affecting the indoor air quality. He followed up with various green chemistry initiatives by Nippon and how they can address the VOC emissions.

Dr. Anukant Mital, Consultant, International Copper Association India, presented on Antimicrobial Copper Touch Surfaces. In his presentation, he elaborated on copper, its alloys and their benefits to users. He expanded upon Copper application in green buildings, possible uses such as heating, building automation, roof top installations, electrical vehicle charging station, anti-touch microbial surface etc. He further reiterated that the only product that can claim to be anti-microbial is Copper or copper alloy with 60% of copper



Master Speaker Session : Shaping Architecture & Urbanization

The session was excellently moderated by **Mr Ashish Rakheja** Chairman - IGBC Technical Committee. Panelists spoke on Role of Digital in Emerging Green Building Trends. The panelists were as follows:

- **Prof. Pedro Ortiz**, Principal, International Metropolitan Institute, Washington DC spoke on Green Metropolises
- **Ms. Jennifer Anderson**, Senior Vice President, Strategy, Business Development & Chief Sustainability Officer, Carrier
- **Mr. Bobby George**, Senior Vice President & Chief Digital Officer, Carrier

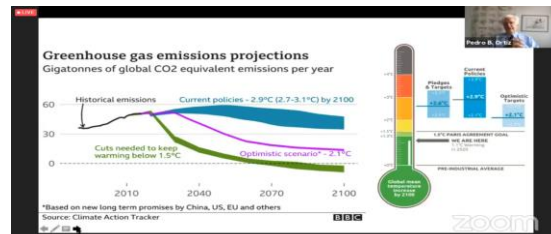


The key takeaways from the Session are as follows:

- Urbanisation is creating an urgent need for sustainable solutions.
- Every day 1,80,000 people move to urban areas all over the world
- There is a high level of growth expected in the next three years among those who anticipate doing more than 60% of their projects green.
- Most important business benefits of Green Buildings are Lower Operating Cost, Improved Occupant Wellbeing and increase in value of the asset.
- There is always a disconnect between first costs and operating costs when it comes to green buildings.
- Beyond the business case, energy and carbon savings are important drivers of Green Buildings.
- Climate change will continue to influence Green Buildings in the next 5 years.

Key Takeaways from Master Speaker Session on Green Metropolises:

- Metropolises are the source of power for a country.
- Design of the Metropolises and Environment should go hand in hand.
- More than 50,000 people in India are moving to Urban areas everyday.
- Governments should start managing the high-density Metropolises keeping in mind the impact it has on climate change.
- The world cultures must integrate, and India should be the leader in this integration process for better responsibility and action towards climate change.



Our Unique Perspective

A CHANGING WORLD
Urbanization is creating an urgent need for sustainable actions and solutions.

- OVER THE NEXT 30 YEARS
global population growth 35%
- EVERY YEAR
180,000 people move to urban areas
- 70%** living in cities
- 40%** Buildings are the largest consumers of energy
- 40%** Within the business, HVAC systems are the largest consumers of energy

The impact of green buildings

- 26.4%** Improved cognitive function
- 30%** Improved personal health
- \$5.8B** Improved societal health

We spend 95% of our time indoors - which means the performance of our environments has an outsized impact on personal and societal health and well-being. People that worked in green-certified buildings with enhanced air quality experienced:

Day 3 : Technical Session

Latest trends and Technologies

This technical session was moderated by **Ar. Sandeep Shikre**, Chairman, IGBC Mumbai Chapter and **Mr. Manoj Kar**, Chairman, IGBC – Bhubaneswar Chapter. The moderators spoke about keeping updated on the latest trends and technology in green construction, maintenance and operation.



Mr Anshul Khandelwal, Strategy Leader, Reliance New Energy Solar Ltd, shared detailed insights on energy sector trends and buildings for the future. He informed the audience on Reliance New Energy Solar Ltd's large-scale implementation of Solar Energy. He emphasised on the '3D' approach of Decentralise, Digitalise and Decarbonise to create responsible and sensitive buildings and built environments.

Mr Jean-Francois Chartrain, Chief Operating Officer, Tabreed & **Mr Sudheer Perla**, Country Manager – India, Tabreed introduced Tabreed and their extensive work in the field of cooling. They shared experiences and case studies from global District Cooling operations. Their presentation focused on demonstrating how various sustainability benefits can be achieved through use of district cooling. Tabreed works with a tag line getting 'more with less'.



Mr. Amit Kumar, Group CEO & Executive Director, Symphony Limited, made a strong case on how Evaporative Air Cooling has come out as one of the most sustainable and environment-friendly solutions amongst the alternatives available. He presented on Contemporary Cooling Solutions for Commercial Applications. Further, he shared regarding the Venti-Cool system, opportunities and cooling needs of the industry, and showcased case studies to support his argument.

Mr. Basanth Kumar, Sales Director - India & South Asia, Armstrong Fluid Technology, presented an overview of today's HVAC pumping solutions. He elaborated on Intelligent Pumps and Controls Capabilities and their role in creating greener buildings and operating systems. He explained how the mantra has been to facilitate improved energy efficiency, low installations & operation cost, enhanced service, and commissioning savings for the industry. He introduced the audience to many of Armstrong's innovative and unique offerings.



Panel Discussion - Enhancing Urban Landscaping and Quality of Life – Challenges, Opportunities and Action

The session started with **L.Ar. Ashish Patankar**, Elected Fellow Member, ISOLA, moderator for the session sharing his views on urban landscaping and quality of life in Urban scenario. He then introduced **L.Ar. Minesh Parikh**, Co-Founder, NMP Design for presenting on Urban Landscaping - National Scenario and Vision for Future to set stage for the panel. The panelists were as follows:

- **Mr Anil Kumar Epur**, Chairman, IGBC Landscape Committee & Chairman, Agri Horticulture Society, Hyderabad
- **L.Ar. Sridevi Rao**, President, ISOLA
- **L.Ar. Divya Sharma**, Landscape Architect, Shantanu Sharma & Associates, Udaipur
- **L.Ar. Sachin Jain**, Former Honorary President, ISOLA



L.Ar. Minesh Parikh, Co-Founder, NMP Design in his lead presentation urban landscaping focusing on natural resources like land and water. He expanded on greenery in 3 dimension with versatile possibilities that it creates. He used case studies of various projects with innovative landscaping that are creating green in the cities – Urban forestry and greenery coexisting with concrete in urban environment. He introduced concept of Miyawaki forests, Carbon capture storage technology and net zero energy contraptions, water rejuvenation through floating wetland systems, soil bio technology etc.

The key takeaways from the Panel discussion are as follows:

- How to engage key stakeholders in urban landscaping
- Initiatives like Flora lecture series on various topics like hydro phoning, nocturnal plant species, landscaping projects increasing awareness and creating impact
- Need for landscapes standard that incorporates STP's and other elements as an integral part of design
- Global landscaping scenario, landscaping products, use of modernistic technology in landscape projects
- Need for creating data sets of different climate typologies for better design approach
- Shift toward indoor plants than high energy intensive installations for aesthetics for better quality of life
- City transformation in general quoting examples of Singapore, Udaipur etc.
- Priority to conserve natural habitat of the existing environment as development is leading to degradation of land and soil quality

Technical Session : Case Studies

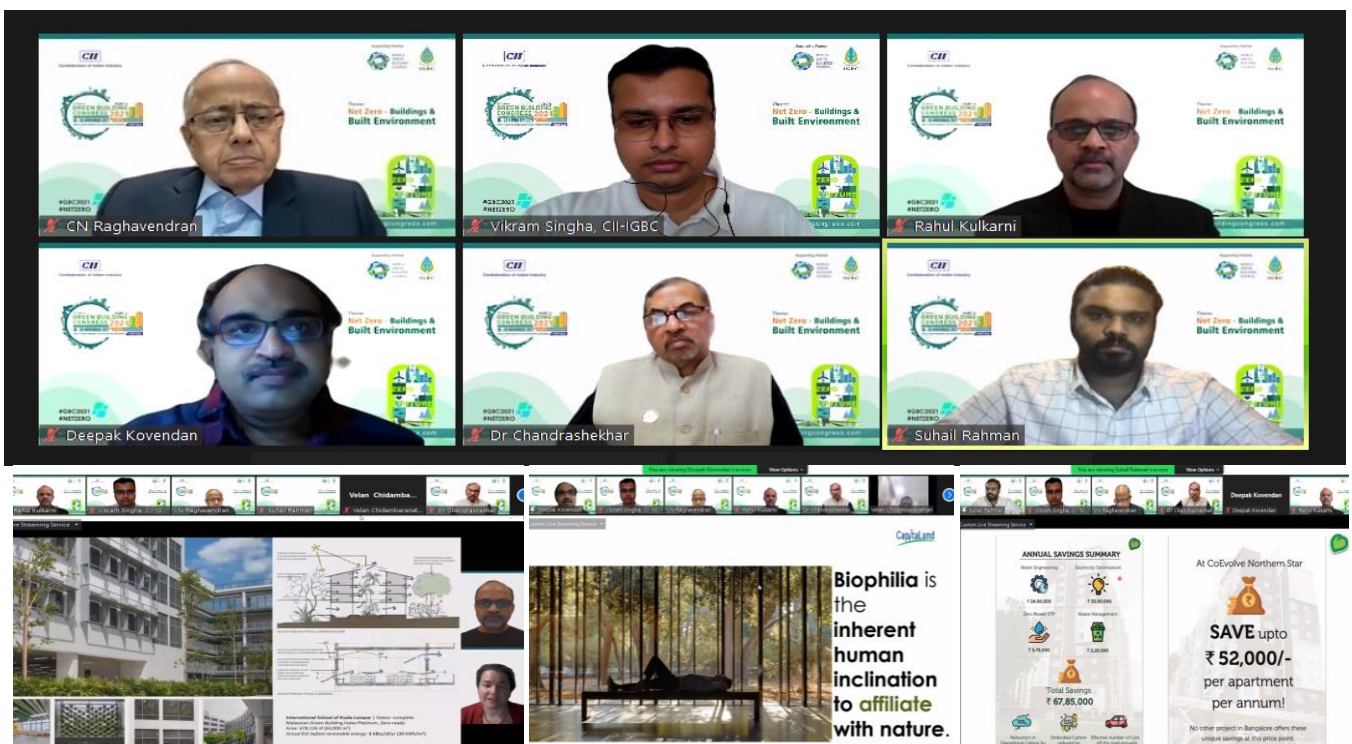
The session was excellently moderated by **Ar C N Raghavendran** - Chairman, IGBC - Chennai Chapter and **Dr. Chandrashekar** - Chairman, IGBC Green Healthcare Facilities Rating.

The speakers and their presentation topics were as follows:

- **Ar. Anica Landreneau**, Director of Sustainable Design, HOK & **Ar. Rahul Kulkarni**, Senior Associate Director, HOK presented : Case Studies on Net Zero
- **Dr. C Velan**, City Head - Chennai Operations, Capitaland and **Ar. Deepak Kovendan**, Design Manager, Capitaland presented on Biophilic design for a sustainable future.
- **Mr Suhail Rahman**, MD & CEO, CoEvolve Estates presented on Sustainability in Green Homes

The key highlights of the three presentations are as follows:

- The first presentation started from scenario-based building forms and covered a variety of project typologies like schools, government buildings, retrofit applications, etc. Also the presenter highlighted projects with concepts like net zero, net positive and near net zero.
- The second presentation focused on biophilic design with case studies of projects in Singapore and Chennai.
- The third presentation showcased the entire project journey of CoEvolve Northern Star in Bengaluru which has achieved the prestigious PLATINUM green building certification as per the IGBC Green Homes Rating. The presenter apprised about the green strategies, cost, marketing and challenges associated with this project.



Conference on GreenPro : Inaugural Session

The Inaugural session of GreenPro started off on a strong note with **Mr. K S Venkatagiri**, Executive Director, CII-Godrej GBC, welcoming the chief guests and the delegates from across the globe to the inaugural. He introduced the chief guests followed by **Mr ParasuRaman R**, Chairman, Green Products and Services Council, Founding Chairman, IGBC delivering the welcome and theme address.



Mr. ParasuRaman, in his address introduced the attendees on the progress made by GreenPro so far in building products segment. He also expanded on initiatives taken for expanding in industrial and consumer segment. He spoke on GreenPro's 'Green Consumption' initiatives and progress made by construction industry, Sustainable public procurement and GreenPro's institutional partnerships with various national and international organisations.

Mr Mahendra Singhi, MD & CEO, Dalmia Cement (Bharat) Ltd, delivered his special address by extending his compliments to GreenPro and IGBC on successful GBC 2021 and progress made by GreenPro in creating a green element in everything produced. He addressed areas such as decarbonizing built environment, supply chain and infrastructure to become net zero and how GreenPro can play key role. He further shared his experience of participating in COP26 touching upon IPCC reports, carbon markets establishment etc. He also spoke on Dalmia's in sustainable carbon initiative. He further stressed on the need for strong policy and regulatory support in achieving carbon mitigation goals and how GreenPro can be a catalyst in the process.



Mr Chin-Yuan Chen, Green Mark Program, Taiwan, in his special address delivery focused on sustainable consumption and production initiative. He took up the example of Taiwan with ecolabel playing a key role in the initiative. He emphasized on Ecolabels helping consumers make their purchasing decisions in simplified and easier way. He explained Taiwan's practice in implementing sustainable consumption and production through 'Government Green Purchasing' and incentives extended by Government for enabling the same. He also introduce to the criteria for various green materials and products.



Mr S Karthikeyan, Principal Counsellor, CII-GBC announced the GreenPro awards and virtually felicitated and congratulated the 17 Awardee companies across various product categories in building, industry and consumer product avenues.

MoU inked between CII & International Copper Association

MoU was signed between CII & International Copper Association for developing standards for Copper and copper related products and creating awareness among the stakeholders. Mr Mayur Karmakar, Managing Director at International Copper Association India and Mr KS Venkatagiri exchanged the signed MoU virtually. Mr Karmakar quoted earlier speakers in mentioning about ecolabels having clear linkage to SDG's and their effectiveness in creating market demand. He expressed his happiness in taking this journey in partnership in CII GreenPro. Copper production and products being a fragmented segment predominantly with MSME, Mr Karmakar said that this platform will be crucial in bringing the MSME's together for creating a positive impact.

Mr. K S Venkatagiri, Executive Director, CII-Godrej GBC concluded by thanking the dignitaries for their special address and congratulated all the awardees on achieving GreenPro ecolabel for their products and his elation on signing of MoU with International Copper Association.



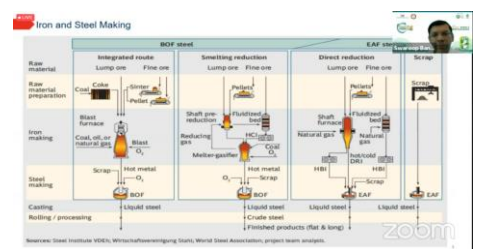
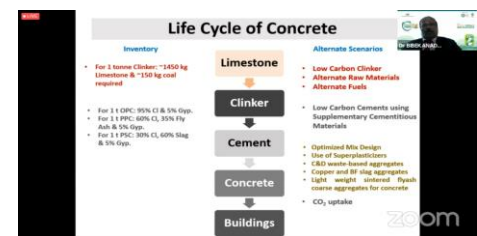
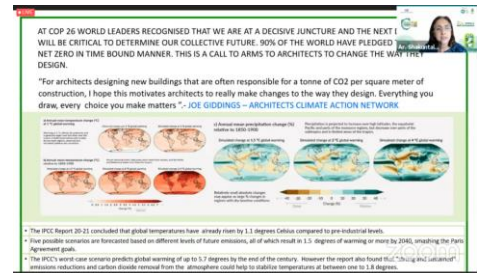
Conference on GreenPro: Session on Green Supply Chain Supporting Net Zero

The session was excellently moderated by Mr K N Rao Chairman - Former Director - Energy & Environment, ACC Limited. The panelists were as follows:

- **Ar Shakuntala Ghosh**, Principal Architect and Partner Ghosh, Bose & Associates
- **Dr B N Mohapatra**, Director General, National Council for Cement and Building Materials
- **Mr Swaroop Banerjee**, Vice President - Corporate Sustainability
- **Mr Rahul Chopra**, CEO - Boards and Panels Business Division, Everest Industries Limited

The key takeaways from the Session are as follows:

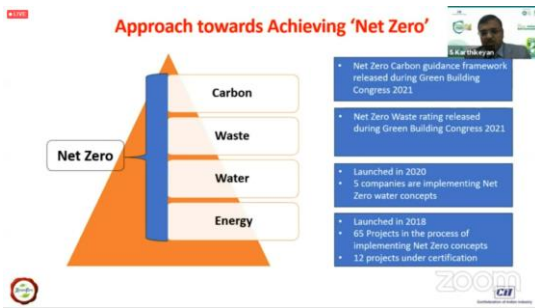
- IPCC reports 20-21 conclude that global temperatures have already risen by 1.1 degree Celsius compared to pre-industrial levels.
- India always had a diverse and rich tradition of vernacular architecture using local and sustainable materials suiting the regional climatic conditions.
- By 2050, more that 50% of world population will be urban and construction will have to keep pace with the demand.
- To realize the ' Net Zero goal existing and new construction has to be environmentally sensitive at every step ensuring energy and resource efficiency.
- World must move towards 'Beyond Net Zero' Towards a carbon removal economy.
- Direct CO2 emissions are targeted to be reduced to 0.35 t CO2/t of cement by 2050.
- Extensive research is going on all over the world on reducing the energy cost of carbon capture.
- India to emerge as a Net exporter of steel by 2025.



Conference on GreenPro: Session on Clean Technological Interventions for Net Zero Energy

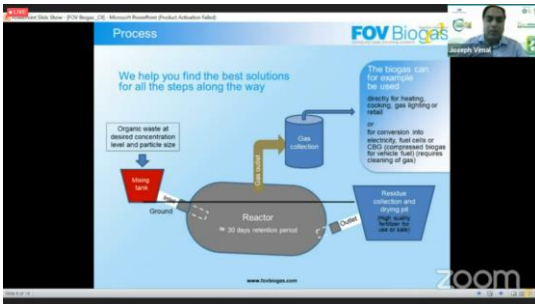
The session was excellently moderated by **Mr. Nanthagopalan TK**, Director – Sales, Ops & Service, Johnson Controls India. The panelists were as follows:

- **Mr S Karthikeyan**, Principal Counsellor, CII GBC
- **Mr Rohit Dhar**, Chief Operating Officer, EMMVEE Photovoltaic Power Pvt Ltd
- **Mr Ayaz Kamil**, Head – Energy & Performance Services (EPS), Smart Infrastructure, Siemens Ltd
- **Mr Joseph Arulappan**, CEO, FOV Biogas India



The key takeaways from the Session are as follows:

- Concept of Net Zero is gaining significant momentum
- Selection of low carbon products - reduce carbon footprint and enhances performance
- Prioritize energy conservation and focus on the appropriate improvement measures towards carbon reduction opportunities.
- Bi-Facial solar can facilitate to a greater extent when it comes to Net Zero Energy Buildings.
- Innovative business models are required to achieve Net Zero.
- Savings are more than initial cost when it comes to Net Zero Buildings.
- It is important to be energy efficient and reduce energy consumption before going for Net Zero Energy Buildings.



Conference on GreenPro: Towards Net Zero Water

The session was moderated by **Dr Nimish Shah**, Managing Director, IAPMO India. The panelists were as follows:

- **Mr Sudhanshu Pokhriyal**, CEO, Brilloca Limited
- **Mr Amit Shah**, Global Head, Arvind Envisol Limited
- **Mr Habil Attarwala**, Founder, Furaat Earth Pvt Ltd



The key takeaways from the Session are as follows:

The built environment highly requires to focus on the three R's – Reuse, Recycle and Reduce.

- **REDUCE** : 28% of the world's water consumption is used in bathing and 20% in Toilet, with efficient water fixtures we can tackle this problem.
- **RECYCLE** : Sewage water should be highly valued, it is equivalent to petrol or other crude oil. Arvind Envisol STP is stepping towards greener environment by using most effective technology by treating sewage water with minimal energy to obtain clean water.
- **REUSE** : We must learn from our vernacular construction style to harvest the abundant rainwater available to us.
 - 80% of water consumption is from bore wells, and as the water levels drop, we are submersing pumps deeper and use more energy.
 - Rainwater harvesting is highly required to recharge our aquifers. It has a lot of potentials even in spaces of 35 sqm to as large as a city.

TOWARDS A GREEN BATHROOM

A residential building with 300 flats, 4 occupants per flat can save 38% of water, with Hindware Water saving EWCs and Faucets, that means- Savings of 1.5 Cr ltrs per annum

	ASSUMPTION				
	2 People can use 2 Toilet on an average		NON-STAR RATED		SINGLE FLUSH
	STAR RATED		Small Flush @ 3 litre	Big Flush @ 6 litre	
Total Flush	Small Flush @ 2 litre	Big Flush @ 4 litre	2	2	2
Water Consumption	20 litres	8 litres	30 litres	12 litres	72 litres
Excess Usage	2.8 litres		4.2 litres (1.4 litres Extra)		72 litres (44 litres Extra)
Savings			>30%		>60%

LIVE TWO ENDS OF THE SOLUTION

RAIN WATER HARVESTING
 Harvesting collected rainwater from the ground. This rainwater can be used for various purposes such as watering plants, flushing toilets, and cleaning. Rainwater can be stored in tanks or used directly from the ground.

ALTERNATIVE ENERGY SOURCE
 The remaining contribution to 60% reduction can be achieved by storing electricity from renewable sources.

LETS USE RAINWATER

TOWARDS A GREEN BATHROOM

Transformation of Water Closet

15L Flush → 6/9L Dual Flush → 3/6L dual Flush

Conference on GreenPro: Net Zero Waste to Landfill



This technical session was moderated by **Mr Anup Mathew**, Senior VP and Business Head, Godrej Construction. **Mr. Anup Mathew** started the session by mentioning that the NetZero movement must extend to waste management and responsible disposal as well.

Ms Wilma Rodrigues, Founder & CEO, SAAHAS Zero Waste, shared her journey and all about SAAHAS. She informed on opportunities and challenges in India regarding waste and mentioned how proper processes can be brought in to regulate it. She put a spot light on the relation between Nature, People and Technology for a circular economy. **Ms. Wilma Rodrigues** exclaimed that “nature knows no waste” and that all waste must be recycled or upcycled. She stated that we cannot afford to take half measures and must give our 100% to address holistic solutions for waste management.



Mr Biswajit Roy, Business Head-Building Insulation, U.P. Twiga Fiberglass Ltd spoke on the role of the insulation industry in preventing landfills and environmental sustainability and shared various initiatives taken by insulation companies.

He informed on the importance of recycling and reusing to ensure no material is considered as waste. He educated the audience on different types of waste generated and the opportunities that present themselves at every stage of manufacturing to contribute to the NetZero Waste goal. He presented detailed insights on how to manage and handle waste at different levels.



Mr Abhijeet Gawde, Head - Business Development & Marketing, Godrej Construction, shared Godrej Construction's journey on adopting a circular economy for a sustainable future. He highlighted the challenges and opportunities of the cradle to cradle approach. He also addressed zero waste construction and touched upon embodied carbon in the materials used. He is confident that India can lead the way if the industry comes together to address the issues and take up green construction.

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IGBC GREEN BUILDING RATING SYSTEMS

Till date, IGBC has launched 30 different IGBC GREEN building rating programs to suit various types of projects - residential, commercial, healthcare, industrial, educational, etc. IGBC-rated projects fall under the following categories (in ascending order): Certified, Silver, Gold and Platinum.

The IGBC-rated green projects offer tremendous savings in terms of energy (up to 20 - 30%, as compared to baselines) and water consumption (up to 50% over baselines) along with better waste management and numerous intangible benefits like fresher indoor air quality with primary focus on the health, well-being and productivity of the Occupants.

Net Zero

- IGBC Net Zero Energy Buildings
- IGBC Net Zero Water
- IGBC Net Zero Waste Rating
- IGBC Net Zero Carbon buildings Guidance Framework

Commercial

- IGBC Green New Buildings
- IGBC Green Existing Buildings
- IGBC Green Interiors
- IGBC Green Data Centre
- IGBC Green Campus
- IGBC Green Resorts
- IGBC Green Service Buildings
- IGBC Green Logistics & Warehouse

Residential

- IGBC Green Homes
- IGBC Green Affordable Housing
- IGBC Green Residential Societies

Transit

- IGBC Green Mass Rapid Transit Systems (MRTS)
- IGBC Green Existing MRTS
- IGBC Green Railway Stations
- IGBC Green High-Speed Rail (HSR)

Built Environment

- IGBC Green Cities
- IGBC Green Existing Cities
- IGBC Green Townships
- IGBC Green Landscape
- IGBC Green Villages
- IGBC Green Hill Habitat

Education

- IGBC Green Places of Worship
- IGBC Green Schools

Industrial

- IGBC Green Factory Buildings
- IGBC Green Special Economic Zones

Health & Wellbeing

- IGBC Green Healthcare Facilities
- IGBC Health & Well-being



Green Building Congress (GBC) 2021
Supporting Green Building Councils across The Globe

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WORLD GREEN BUILDING COUNCIL

<p>Australia</p> 	<p>Brasil</p> 	<p>Canada</p> 	<p>Chile</p> 	<p>Ecuador</p> 
<p>Honk Kong</p> 	<p>Indonesia</p> 	<p>Korea</p> 	<p>Malaysia</p> 	<p>Mauritius</p> 
<p>Peru</p> 	<p>Philippines</p> 	<p>Poland</p> 	<p>Singapore</p> 	<p>Sri Lanka</p> 
<p>Taiwan</p> 	<p>Uganda</p> 	<p>Vietnam</p> 		

IGBC SENIOR FELLOW AWARD 2021

The most prestigious IGBC Fellowship award is bestowed to exemplary contribution from the industry. CII's IGBC takes pride in honouring our **Senior Fellowship Awardees**

 <p>IGBC Senior Fellow Mr Sameer Sinha Managing Director, Savvy Group</p>	 <p>IGBC Senior Fellow Ar Sandeep Shikre Founding Principal, SSA Architects</p>	 <p>IGBC Senior Fellow Ar Jayesh Hariyani MD, INI Design Studio</p>
 <p>IGBC Senior Fellow Mr Ashish Rakheja Managing Partner, AEON Integrated Building Design Consultants</p>	 <p>IGBC Senior Fellow Dr C Velan City Head, CapitalLand</p>	<p>IGBC SENIOR FELLOW</p>

The most prestigious IGBC Fellowship award is bestowed to exemplary contribution from the industry. CII's IGBC takes pride in honouring our **Fellowship Awardees**

IGBC FELLOW AWARD 2021

 <p>IGBC Fellow Mr Jitendra Mehta Director, Mehta & Associates</p>	 <p>IGBC Fellow Mr Lava K MD, Skyline Foundations & Structures Pvt Ltd</p>	 <p>IGBC Fellow Mr Anup Mathew Senior VP & Business Head, Godrej Construction</p>
 <p>IGBC Fellow Mr A Vaidyanathan Founder & MD, Personal Air Quality System Pvt Ltd</p>	 <p>IGBC Fellow Mr Maheep Singh Thapar MD & Principal Consultant ADAPT Technologies</p>	 <p>IGBC Fellow Mr Nanthagopalan TK Director, Building Technologies & Solutions, Johnson Controls</p>

IGBC Fellow

Mr Kavin N
Head – Design,
En3 Sustainability Solutions

IGBC Fellow

Ar Nupur Risbood
Technical Director,
DesignTree Service Consultants

IGBC Fellow

Mr Shashi Ray
Associate Chief Manager,
Godrej & Boyce Consulting Services

IGBC Performance Challenge Awards 2021

The most prestigious IGBC Performance Challenge award is bestowed to recognize continuous performance improvement in 'Certified Green Buildings'

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

powered by Johnson Controls

CATEGORY
Campuses

Infosys Mysore-Global Education Center-2
Mysore

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Data Centers

STI GDC India - DC-2
Chennai

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Data Centers

Netmagic-DC3B
Bengaluru

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Factory Buildings

ZAHORANSKY Moulds And Machines Private Limited
Coimbatore

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Factory Buildings

Mahindra Technical Academy
Chengalpattu

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Factory Buildings

Vaibhav Global Limited
Jaipur

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Hospital Buildings

Apollo Hospitals
Navi Mumbai

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Hospital Buildings

Greater Noida Medical University and Associated Hospital
Noida

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

powered by Johnson Controls

CATEGORY
Hospital Buildings

Indian Railway Central Hospital
Jaipur

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

powered by Johnson Controls

CATEGORY
Hotel Buildings

ITC Limited- Welcomhotel
Coimbatore

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
IT/ITES

Infosys Ltd Software Development Block-5
Mysore

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
IT/ITES

Cappgemini Technology Services India Ltd
Hinjewadi, Pune

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
IT/ITES

Bearys Global Research Triangle
Bengaluru

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

powered by Johnson Controls

CATEGORY
Office Buildings

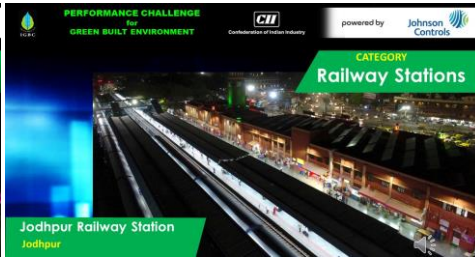
Transit Electronics Limited Head Office
Surat

PERFORMANCE CHALLENGE for GREEN BUILT ENVIRONMENT

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CATEGORY
Office Buildings

Shapath V
Ahmedabad



8th Edition of IGBC Green Champion Awards 2021

The annual Green Champion awards is the most prestigious honour bestowed by IGBC upon the leaders of the Green Building Movement.

Architect leading the Green Building Movement in India

**Architect leading the
Green Building Movement in India**

SPACE MATRIX

URBANFRAME
A Space Matrix Group Company



**Architect leading the
Green Building Movement in India**

essteam



Developer leading the Green Building Movement in India

**Developer leading the
Green Homes Movement in India**

VJ



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**Developer leading the
Green Affordable Housing Movement in India**



Corporate leading the Green Building Movement in India: Commercial

**Corporate leading the
Green Building Movement in India - Commercial**



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Corporate leading the Green Building Movement in India: Retail



Corporate leading the Green Building Movement in India - Retail



State Government encouraging the Green Building Movement in India through multi-pronged approach

State Government encouraging Green Building Movement in India through multi-pronged approach



Indian Railway Zone with the highest number of Green Railway Station

Indian Railways Zone with the highest number of Green Railway Stations



Organization leading the Net Zero Energy Building Movement in India:

**Organisation leading the
Net Zero Energy Building Movement in India**

Capgemini



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Organization leading the Healthy Building Movement in India:

**Organisation leading the
Healthy Building Movement in India**



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Godrej | PROPERTIES



Pioneer in Healthcare sector with highest number of Green Hospital in India

**Pioneer in Healthcare sector with
highest number of Green Hospitals in India**

**MAX
Healthcare**



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Pioneer in Financial Sector with hiahest number of Green Branches in India



***Pioneer in Financial sector with highest
number of Green Bank Branches in India***



Pioneer in large scale adoption of Green factories buildings in India

***Pioneer in large scale adoption of
Green Factory Buildings in India***



Pioneer in large scale adoption of Green Logistics Parks in India

***Pioneer in large scale adoption of
Green Logistics Parks in India***



Pioneer in large scale adoption of Green Data Centers in India

Pioneer in large scale adoption of Green Data Centers in India



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Organization encouraging IGBC Accredited Professional



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Organisation encouraging IGBC Accredited Green Building Professionals



Launches During Green Building Congress 2021

The year 2020-2021 has been inspiring and paved new growth paths for IGBC and the Net zero movement in India. We launched IGBC's Mission on Net Zero on Earth Day (22 April 2021), with a vision to facilitate 'India to become one of the foremost countries in transforming to 'Net Zero' by 2050'.

During this year, we had launch of IGBC local chapter at Belgavi, Virtual IGL 2021 event, launch of Net Zero Waste rating system for Buildings & Built environment and IGBC Guidance framework for Net Zero Carbon Buildings, and many other activities, with all your kind support, valuable time, efforts!. Capturing the new initiatives and success stories, Annual Report of IGBC was released during annual members session.

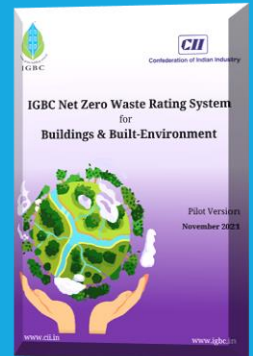
The annual review broadly covers the activities and initiatives of IGBC and the local chapters. The review will give you an overview of the diverse activities of IGBC.



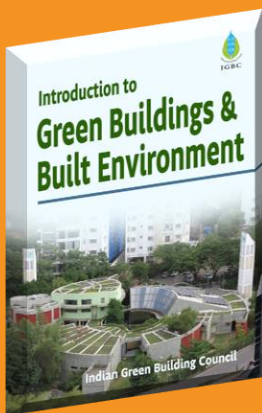
IGBC NEW RATING SYSTEMS / PUBLICATIONS LAUNCHED

IGBC Net Zero Waste Rating System for Buildings & Built-Environment

The development of IGBC Net Zero Waste Rating System for Building & Built-Environment is another important step in this direction, the rating system is developed under the leadership of Mr. Anup Mathew, Senior Vice President & Head - Godrej Construction. The Net Zero Waste Rating System for Building & Built-Environment aims at addressing the issues related to waste generation during construction, operation and maintenance of the buildings and built-environment. More than 50 industry leaders and subject matter experts from different sectors have contributed for the development of this rating standard.



'Introduction to Green Buildings & Built Environment'



This book 'Introduction to Green Buildings & Built Environment', is developed by IGBC to provide a holistic & comprehensive guide on concepts of sustainability. The book will be an excellent resource material for the universities to use as part of their course curriculum.

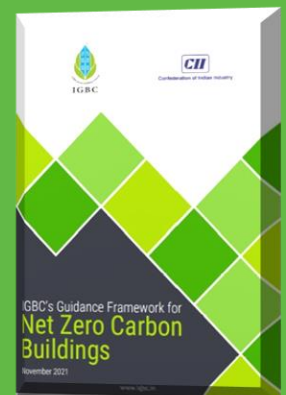
This one of a kind publication details out key focus areas such as Sustainable Sites, Water Management, Energy Management, Materials & Resources and Indoor Environmental Quality. Institutions can integrate this content into their courses or curriculums with ease and give exposure to students on green concepts in design, construction & operation of buildings, and latest trends and technologies. This book will also facilitate Academia and Industry linkage and help Educational Institutes to develop Industry-ready professionals trained on green concepts.

IGBC Guidance Framework for Net Zero Carbon buildings

The guidance framework for Net Zero Carbon buildings is developed under the leadership of Architect Sandeep Shikre, Chairman, IGBC Committee for Net Zero Carbon.

The framework is developed to support the building projects initiate carbon inventorisation and develop roadmap for abatement.

More than 50 industry leaders and subject matter experts from different sectors have contributed for the development of this framework.





Confederation of Indian Industry



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GREEN BUILDING CONGRESS 2021

Partner Country



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Performance Challenge 2021



IGBC Green Your School Programme 2021



IGBC Green Design Competition 2021



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Gold Supporters





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The 'IGBC Green Champion Award' is the highest honour bestowed by IGBC upon the leaders of the green building movement in India. These organisations are Pioneers who have changed the Perspectives and created a profound impact on the People and the Planet.

Developer Leading the Green Building Movement in India



Corporate Leading the Green Building Movement in India





Government Organization Championing the cause of Green in India



Architect with largest green building design footprint in India



Organization / Institute encouraging IGBC Accredited Professionals (AP)



Pioneering institution in sensitizing the masses by Going Green



Leadership



V Suresh
Chairman

Gurmit Singh Arora
Vice Chairman

Across India, IGBC has launched **28 local chapters** which are led by champions who have walked the talk and have set new benchmarks in sustainable construction.

All these chapters work closely with the stakeholders in facilitating the spread and growth of green buildings and green built environment across the length and breadth of the country.

Ahmedabad



Sameer Sinha



Jayesh Hariyani

Amaravati



Vijaya Sai Meka

Bhubaneswar



Manoj Kar



Sofia Firdous

Chandigarh



Jit Kumar Gupta



Col Shaillesh Pathak

Guwahati



Ar Ramendra
Nath Baishya



Er Pranab
Kr Sharma

Hyderabad



C Shekar Reddy



Abhaya Shankar

Indore



Ar Jitendra Mehta

Kolkata



Shakuntala Ghosh



Sushil Mohta

UP State



Sameer Gupta



Amit
Srivastava

Mangaluru



DB Mehta



Venkatesh Pai

New Delhi



Sheetal Rakheja

Pune



J P Shroff



Poorva Keskar

Surat



Ar Snehal P Shah

Aurangabad



Navin Bagadia



Makarand Deshpande



Hares Siddique



Syed Mohamed Beary



Dr Chandrashekar Hariharan



Rajendra Belgaumkar



Chaitanya Kulkarni

Bengaluru

Belagavi

Chennai



Ar C N Raghavendran



Ajit Kumar Chordia

Coimbatore



Rajesh B Lund



Bharat Kamat



K K Sekhar

Goa

Jaipur



Jaimni Uberoi



Anand Mishra



Ar B R Ajit



K Lava



Ar P Mathew Joseph

Kochi

Mumbai



Ar Sandeep Shikre



Ar Hiten Sethi



Mala Singh

Mysore



M G Somashekar



Vinod Maroli



Kiran Chavan



Sunil Kotwal

Nasik

Vadodra



Bhavesh Shah



Neetu Jain



Ashok Mokha



Shankar Ghime

Vidarbha

Vishakapatnam



Dr. S. Vijaya Kumar



Leela Prasad K

Western UP



Sachin Sharma

IGBC

Executive Board Members



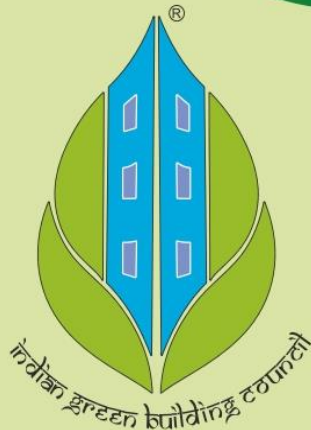




IGBC acknowledges IGBC's founding members, members & all stakeholders for their time, efforts, dedication, active participation and involvement in the Indian Green Building Movement since its inception in 2001.



JOIN THE GREEN BUILDING MOVEMENT



IGBC

**ACCESS
INDUSTRY
TRENDS
AND
DEVELOPMENT**

**ACCESS
TO
TECHNICAL
RESOURCES**

**PLAY AN
ACTIVE ROLE
IN THE ADVOCACY
OF GREEN
BUILDINGS**

**CONTRIBUTION
TOWARDS
SUSTAINABLE
COMMUNITY**

**CONNECT
WITH
GREEN
BUILDING
LEADERS**

**EXPOSURE
TO
GREEN
BUILDING
MARKET**

**STAY
ENGAGED**

**EXCLUSIVE
DISCOUNT
ON
IGBC
SERVICES**



Confederation of Indian Industry

The Indian Green Building Council (IGBC), part of the Confederation of Indian Industry (CII) was formed in the year 2001. The vision of the council is, "To enable a sustainable built environment for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025".

The council offers a wide array of services which include developing new green building rating programmes, certification services and green building training programmes. The council also organises Green Building Congress, its annual flagship event on green buildings.

The council is committee-based, member-driven and consensus-focused. All the stakeholders of construction industry comprising of architects, developers, product manufacturers, corporate, Government, academia and nodal agencies participate in the council activities through local chapters. The council also closely works with several State Governments, Central Government, World Green Building Council, bilateral multi-lateral agencies in promoting green building concepts in the country.

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government, and civil society through working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for Industry.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. The premier business association has over 9000 members, from the private as well as public sectors, and an indirect membership of over 300,000 enterprises from around 294 national and regional sectoral industry bodies. With 62 offices, including 10 Centres of Excellence in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 394 counterpart organizations in 133 countries, CII serves as a reference point for Indian Industry and the international business community.

INDIAN GREEN BUILDING COUNCIL

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