

EmiratesGBC 2024 Congress Briefing

Beyond COP28: The Role of the Built Environment to Deliver on the UAE Consensus.

*Under the Patronage of the **Ministry of Energy & Infrastructure.***

Panel 1 Briefing: The Building Breakthrough: Closing on Net Zero

“The Building Breakthrough” panel focused on strategies to achieve net-zero by drawing upon global initiatives in near-zero emissions and resilient buildings, aiming to meet these targets by 2030.

Speakers

Dr Ioannis Spanos, VP of Sustainability, Expo City Dubai

Ezziddine Jradi, Chief Transformation and Business Development Officer, Emicool

Hanane El Ghiouane, Senior Commercial Advisor, The Foreign Ministry of Denmark – Trade Council UAE & Qatar

Mohammad Jebreel, Sustainability and Net Zero Strategist, EmiratesGBC Vice Chair

Rohan Chopra, Regional Director of Sustainability – EMEA, Johnson Controls, and EmiratesGBC Board Member

Raji Hattar, Chair of the MENA Regional Network of GBCs, as Moderator

The panel discussion began by addressing the Global Cooling Pledge launched at COP28, with over 60 countries as signatories, and its implications for the district cooling industry. Given that cooling is a significant energy consumer, the discussion shifted to district cooling’s evolution in line with UAE’s environmental goals. Although district cooling services have made progress, the industry still faces challenges that need to be addressed to maximize its potential.

In high-density urban areas and high-rise commercial buildings, district cooling is both financially viable and efficient, which emphasizes the importance of retrofitting and integrating energy-efficient building management practices. Solutions like district cooling play a crucial role in enhancing energy efficiency and consumer-focused operations.

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As **Expo City Dubai** shared insights on achieving net-zero by 2050, the importance of having a clear, phased roadmap emerged, with milestones set for 2030, 2040, and 2050, in alignment with UAE's sustainability targets. **Expo City Dubai** aims to reduce emissions by 45% by 2030 through improvements in energy efficiency and operations. **Expo City Dubai** focuses on energy efficiency and operational efficiencies to achieve the target of a 45 per cent reduction by 2030 for operational emissions, paying close attention to how buildings are managed.

Transportation, under operations, was also discussed as part of the net-zero roadmap, highlighting the potential for more onsite electric charging stations, micro-mobility solutions and trips avoidance. A key component is also the commitment to improving the sustainability of building materials, including concrete, as **Expo City Dubai** aims for a 40 per cent reduction in embodied carbon for new developments by 2030. **Expo City Dubai** emphasized the need to understand broader impacts and plan forward rather than setting rigid targets.

In discussing international collaboration toward the global net-zero goal, the representative from the **Royal Danish Consulate General** in Dubai underscored the importance of public-private partnerships and shared best practices. The UAE's rapid progress and interconnectivity, exemplified by COP28, showcase the impact of collaborative platforms. Denmark's success in district heating and partnership-driven strategies further highlights the need for accelerated synergies across regions and sectors.

The panel also raised questions about carbon accountability in the built environment. The **EmiratesGBC** representative stressed the importance of carbon accounting frameworks to determine responsibility for embodied carbon, such as emissions associated with design or existing buildings. They pointed out that current carbon abatement is more cost-effective than offsetting, emphasizing the need for a clear roadmap aligned with COP28's vision to accelerate decarbonization efforts. The UAE Sustainable Built Environment Blueprint Report serves as a starting point for this roadmap.

Emicool addressed the role of digital transformation in the cooling sector, particularly how data can reveal a building's age, efficiency, and overall performance. Through energy efficiency programs, they've reduced energy and water consumption, and collaborations on leakage reduction have enhanced water efficiency. **Emicool** advocates for public access to such data to encourage sustainable retrofitting solutions.

Expo City Dubai was asked if mega-sustainable cities like itself could be a viable model for achieving the UAE's net-zero agenda. **Expo City Dubai** explained that early design decisions and procedures can be taken to determine how a city can be organised and operated more efficiently.

Additional aspects of operations need to be considered, such as how individuals can reduce waste and how biodiversity can be integrated into the city fabric. There are also good examples of the use and integration of renewable energy into buildings and the cityscape. While recognizing that no single solution fits all, **Expo City Dubai** encourages all adopting best practices.

Focusing on knowledge sharing for net-zero buildings, the **Royal Danish Consulate General** in Dubai advocated for regulatory frameworks to drive private-sector initiatives, urged transparency in data to support retrofitting, and harmonised fragmented codes for better regional adaptation.

Reflecting on the next steps for real estate in achieving net zero. A representative from **EmiratesGBC** noted that while many solutions exist, like green concrete and smart technologies, the challenge lies in integrating these within supply chains to influence tenants and residents effectively. They called for greater collaboration across the supply chain to address initial decarbonisation steps collectively, setting the stage for low-carbon designs and sustainable building practices.

To conclude, the panellists provided valuable insights into the journey toward net zero in the built environment, focusing on challenges, successes, and the collaborative pathway forward. They explored technological innovation and global partnerships, highlighting the complexities and pathways toward a sustainable future.