

EmiratesGBC 2023 Congress Briefing

Pathway to COP28: The Role of Sustainable Built Environment in Accelerating Climate Action

Panel 4: Advancing Net Zero

“Advancing Net Zero” panel discussion aim was to explore innovative strategies, collaborative efforts, and actionable solutions that can accelerate the global transition to a net-zero emissions future.

Speakers

Dr Ali Al Amiri, Regional Director- Sustainability and Specialisms, EGIS

Dr Hassam Chaudhry, Associate Professor, School of Energy, Geoscience, Infrastructure and Society, Heriot-Watt University

Salwa Al Maflahi, Director of Sustainability & CSR - Aldar Properties

Victoria Burrows, Director of Advancing Net Zero, WorldGBC

Samar AlHussein, Senior Architect, Associate and Design Resilience co-leader for Gensler Asia Pacific Middle East Region, as moderator

In the panel discussion on Advancing Net Zero, the panelists examined the progress towards the Net Zero goal and offered recommendations to achieve the target by 2050. Looking at the advancements towards Net Zero at a Global Scale, then zooming into the local region, the WorldGBC expressed that the changes seen in the UAE reflect the changes happening in other regions. However, advancing Net Zero depends on the driving force behind sustainable practices, depending on individual circumstances. For example, for developers, incentives such as favorable finance rates for constructing high-performance buildings served as motivation to advance Net Zero. Currently, financially viable solutions are available to achieve Net Zero in buildings. However, a shift in mindset is needed to achieve the target, and the shift will become easier when case studies that illustrate what is achievable today are showcased. Therefore, it is crucial to involve youth in the conversation to inject creativity and explore the possibilities in advancing to Net Zero. Furthermore, to advance Net Zero, the WorldGBC launched the Net Zero Readiness

Gold Sponsors



مجموعة موانئ أبوظبي
AD PORTS GROUP

Silver Sponsors



framework, aiming to assess its implications for the Middle East region and prepare the sector for the transition to net zero.

Discussing the improvements by the private sector in advancing and implementing Net Zero, EGIS acknowledged that considerable progress has been made in raising awareness and aspirations regarding sustainability and climate change over the past 20 years. For example, two decades ago, sustainability and carbon counting required extensive explanation. In contrast, today, it has become a prominent topic on the political agenda, with the country's leader declaring it the year of sustainability, thus Net Zero is being greatly advanced at a local level.

However, to advance Net Zero further, there is a need for bolder action in response to climate change, and even though construction for Net Zero may not be currently affordable, organizations must aim for Net Zero readiness by 2050. Utilizing the potential of artificial intelligence (AI) to transform master plan design and construction practices is a means to advance toward Net Zero goals. As a result, Egis has introduced the 'Egis Sustainability Artificial Intelligence Lab' (ESAIL) with the objective of incorporating AI into their project processes and planning.

Looking into advancing Net Zero through the lens of retrofitting, it was highlighted by Egis that financial incentives are crucial in making sustainable retrofitting financially viable for clients, because many buildings constructed two decades ago were not designed with sustainability principles. Although retrofitting may not always seem appealing, and architects and designers exercise more freedom with new projects, however, Egis shared an example where retrofitting an empty cinema resulted in an interesting and aesthetically pleasing design with significant carbon reduction.

Next, the conversation was directed towards Aldar to showcase how they are advancing on their Net Zero agenda. At Aldar, since 2018, existing structures, resources, and systems to integrate sustainability into the business operations have been reviewed to allow an acceleration towards sustainability. The key for Aldar's advancement towards Net Zero was their continuous work towards a comprehensive sustainability strategy, collaborating with stakeholders to achieve significant milestones. Also, Aldar understood that advancing Net Zero requires collaboration not only with internal stakeholders but also with external partners. For example, contractors and suppliers represent a key stakeholder group that can support the company achieving the Net Zero targets by providing low-carbon alternatives for materials and operations.

Aldar stressed their belief that sector leaders must encourage and inspire the rest of the market or value chain to embark on the sustainability journey and advance towards Net Zero. Market

awareness is crucial in paving the way towards Net Zero and the interest was visible when Aldar initiated a pledge for organizations to announce their decarbonization targets before COP28 and got the response from 29 companies across their value chain that signed the pledge. However, the panel reiterated that key players in each sector, including themselves, will have to take responsibility for driving sustainability efforts and bringing the entire sector on board the sustainability journey.

Addressing the question of whether the academic sector possesses the necessary knowledge, innovation, and technology to advance Net Zero, the panel pointed out a growing demand for Net Zero programs in the education sector, as delivered by Heriot-Watt University Centre of Excellence in Smart Construction. Advancing Net Zero will require formal programs, initiatives and competitions that focus on Net Zero concepts, AI, and energy efficiency in the built environment. These programs, initiatives, and competitions aim to equip the current workforce with the necessary knowledge and skills to address climate change and advance Net Zero. Nonetheless, the academic sector is making efforts to fulfill its role in sustainability endeavors whenever opportunities arise.

However, to successfully advance Net Zero in relation to the education sector, the panel explored the research gap within the Net Zero concept and discussed the future of Net Zero education. One issue raised was the limited representation of scholarly materials from the Middle East and North Africa (MENA) region in prominent scientific journal databases, highlighting the need for more locally produced publications. Moreover, the solar research landscape emerged as a prominent area within the MENA region. To advance Net Zero, it is crucial to tap into the potential of solar energy, for example, as desalination processes, hydrogen production, carbon capture, and storage.

The panel concluded by examining the key challenges that may arise in advancing Net Zero by 2050 and strategies to ensure a smooth and successful transition to a sustainable, carbon-neutral future. It was emphasized that focusing on solutions and actions is crucial in the pursuit of Net Zero. The notion of impossibility should be challenged, and examples of successful projects should be highlighted to break through barriers. It was also added that engaging the supply chain to accelerate decarbonization through innovative materials and technologies is a priority. The panel also stressed the need for more educational programs and solutions emerging from COP and emphasized the importance of involving academia in climate action and Net Zero endeavors.