

UAE Zero Carbon Readiness

Series 4

Enabling Mechanisms to Support Sustainability Integration



Collaboration paper by AESG in partnership with WorldGBC.



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Foreword

This article has been created by AESG in collaboration with the World Green Building Council (WorldGBC) and its [Middle East North Africa Regional Partners and Net Zero Collaborators](#) through interviews and surveys from industry experts. It is the fourth of four articles that highlight the achievements of advancing net zero in the built environment.

This report is a result of interviews and surveys with industry experts in the UAE:

- A³&Co
- AD Ports Group
- AESG
- Bee'ah Group
- Expo City Dubai
- Dar Al Handasah
- Department of Energy, Abu Dhabi
- Dubai Holding Group and Dubai Holding Real Estate
- ICD Brookfield Place
- Linxion / Bartec Group
- Majid Al Futtaim
- Masdar
- Saint Gobain



The Progress

Advanced technologies

As we navigate toward a sustainable future, UAE’s strategic focus extends to sustainable infrastructure and smart building technologies that converge to create an ecosystem of innovation, harmonising with Net Zero objectives.

Innovative digital platforms are being formed and are revolutionising the adoption of circular economy principles in the construction sector. Circular practices are being seamlessly integrated and materials from deconstructed structures are being repurposed in new projects.

Simulations of buildings through digital twins showcase the ability of developers to make more informed and effective decisions. The challenge arises when translating real world data into the virtual domain. The precise simulation of factors like occupancy rates, lighting optimisation and crafting intuitive user engagement within the metaverse is essential.

Energy Performance Contracting (EPCs)

Building retrofits are essential to decarbonise the sector. The UAE’s super Emirates Specialised Contracting and Oilfield services (ESCOs) and EPCs are a necessity for allowing the mass retrofit of buildings in the market. This will make buildings more energy efficient and assist with overcoming some of the challenges that independent ESCOs face, such as limited access to capital, lack of experience in public sector projects, and difficulty in obtaining relevant approvals.

Integrated Waste Management Contracting

Numerous private and public sector entities have been embarking on the journey of advancing the waste management practices. By developing integrated contracts with waste management companies and setting metrics for recycling, they are achieving 50-90% of waste diversion from landfills.



The Learnings

Appetite to understand the technologies

Businesses in the UAE’s private sector are diligently working on developing in house knowledge of sustainability technologies and practices through capacity building and in house incubator development. It is important to involve the people in the team who received sustainability training at the initiation of the project and not at the final stage before operation.

In addition, many challenges with sustainability integration can be avoided by equipping the procurement team and assisting them to understand how to assess suppliers and types of construction materials and include sustainability requirements in construction contracts.

Challenging Climate Conditions

Due to the specific climate conditions, there is an opportunity for the UAE to take the role of pioneer for future developments in areas where climate is a challenge.



The Opportunity

Understanding of the roles and responsibilities

Construction companies are not aware of sustainability certifications and requirements that are pursued by developers while their role is to approve the materials and construction activities during the development process.

When governments and companies are setting guidelines to reduce carbon emissions, the activities of all stakeholders involved are often not well coordinated. To the point that when effective solutions become available, nobody seems to be in charge of deciding to investigate further, or to adopt it.

Understanding the role and responsibilities of each stakeholder involved in the construction process and having a robust governance mechanism to operate can increase the adoption of sustainable practices.

Collaboration between various stakeholders, including government bodies, industry players, researchers, and sustainability advocates, has contributed to the industry’s maturity in implementing deep decarbonisation measures. These collaborations have facilitated knowledge exchange, best practice sharing and the development of innovative solutions that drive the industry forward.

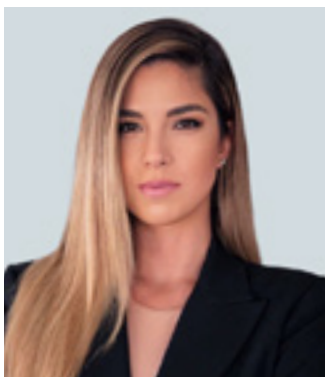
Adopting technologies

Opportunity sits in the adoption of cutting edge technologies, however, the availability and cost of the same can be perceived as a challenge. There is a need in the market for decarbonisation technologies focused on smart systems for efficient asset management, digital monitoring platforms utilising AI, carbon capture and others.

A large amount of demolition waste is disposed of at landfills. The adoption of waste recycling and incineration technologies would be a large benefit to the UAE market.

AESG is an International Consultancy, Engineering and Advisory firm committed to driving sustainability in the built environment and beyond. With the highest calibre leadership team in our field, we pair technical knowledge with practical experience to provide hands-on, bespoke strategic solutions to our clients.

We have one of the largest dedicated teams with decades of cumulative experience in sustainable design, sustainable engineering, fire and life safety, façade engineering, commissioning, digital delivery, waste management, environmental consultancy, strategy and advisory, cost management and acoustics. Our prestigious portfolio demonstrates our extensive capabilities and our ability to consistently deliver best in class solutions to some of the industry's most complex technical challenges.



Tamara Bajic

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Tamara is an Associate Director – Strategy & Advisory at AESG. She holds a Masters' degree in Environmental Engineering with specialization in the fields of Energy Efficiency, GHG Emissions and Decarbonisation. Her sustainability journey in the UAE started with a 6-year engagement with Dubai Government, as part of the DSM PMO office, implementing the Energy Efficiency (DSM) Strategy in Dubai across 11 programmes and more than 10 key government sector stakeholders and private sector market players.

She has led and supported with the design and execution of key activities: DSM PMO office establishment (institutional mechanisms & procedures, organisational objectives, priorities, budget requirements), implementation of operational plans and roadmaps, DSM savings monitoring and evaluation (via data collection, modelling, top management presentations), Capacity and Awareness Programmes.

As part of the AESG Strategy & Advisory team, she has expanded her expertise to accompany government and private sector to plan and implement their Net Zero/Decarbonisation, ESG and Sustainability Journey as it evolves over time. She supports clients to understand their key Net Zero drivers, reporting requirements, following with the design of a tailored Net Zero strategies, roadmaps, action plans, timelines, budget requirements and supporting tools to successfully implement their decarbonisation initiatives and achieve Net Zero goals.

For more information or to arrange a meeting with Tamara Bajic, please email t.bajic@aesg.com

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