



EmiratesGBC

مجلس الامارات للابنية الخضراء
Emirates Green Building Council

UAE Sustainability Built Environment Blueprint

Preview

Endorsed by



UNITED ARAB EMIRATES
MINISTRY OF ENERGY & INFRASTRUCTURE

In partnership with



HSBC



RACE TO ZERO



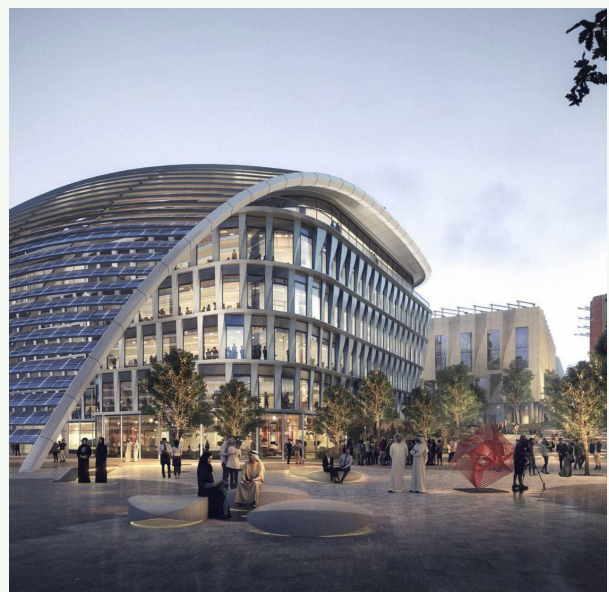
**“Future generations
will be living in a world
that is very different
from that to which
we are accustomed.
It is essential that we
prepare ourselves and
our children for that
new world”**

THE LATE SHEIKH ZAYED BIN SULTAN AL NAHYAN
Founder of the United Arab Emirates

Introduction

The UAE signed the Paris Agreement and, in 2021, was the first country in the Middle East to announce its target to be net zero by 2050. The UAE was also appointed to host the 28th Conference of the Parties (COP28) of the United Nations Framework Convention on Climate Change (UNFCCC).

This further expedited the development of green policies at a national and local level, building on existing efforts across key sectors of the economy including power, water, industry, buildings, transport, waste and agriculture.



PREVIEW

More than 30 federal, emirate and company level programmes are considered in the UAE Net Zero 2050 Strategic Initiative:

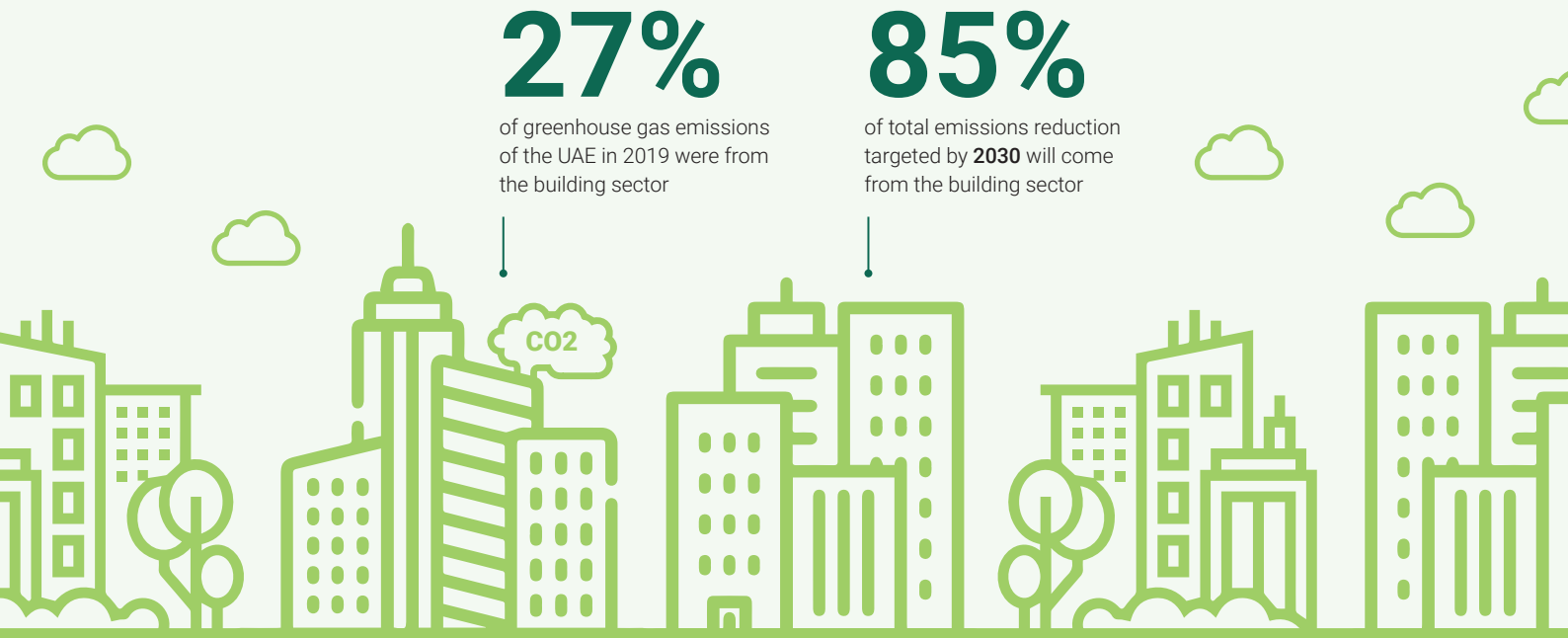
Power & Water	Industry	Transport	Buildings	Waste	Agriculture
‘We the UAE 2031’ Vision					
UAE National Climate Change Plan 2050: UAE Environmental Policy (MOCCAЕ)					
UAE Centennial 2071					
Abu Dhabi Environmental Vision 2030 (EAD)					
Dubai Carbon Abatement Strategy (DSCE)					National System for Sustainable Agriculture (MOCCAЕ)
RAK Energy Efficiency and Renewable Energy Strategy 2040 (RAK Municipality)					
Abu Dhabi Demand Side Management and Rationalization (DoE)				UAE Circular Economy Policy (MOCCAЕ)	UAE Food Security Strategy (MOCCAЕ)
Green Public Procurement for Energy & Water Efficiency (DSCE and RAK Municipality)				Dubai Waste Minimisation Strategy 2020 - 2041	Abu Dhabi Agriculture Plan (ADAFSA)
UAE Hydrogen Roadmap (MOEI)			Dubai Smart Strategy (Dubai Municipality)	Dubai Integrated Waste Management Masterplan 2021 - 2041	
Dubai Clean Energy Plan 2050 (DSCE)	Dubai Demand Side Management Strategy (DSCE)			Abu Dhabi Integrated Waste Masterplan (Tadweer)	
National Energy Strategy 2050 (MOEI)		Abu Dhabi Transport Mobility Management Strategy (ITC)			
Water Security Strategy (MOEI)	UAE Energy Efficiency Program (MOIAT)	Abu Dhabi Surface Transport Master Plan (ITC)			
UAE Energy & Water DSM Program 2050 (MOEI)	Ops. Carbon Footprint Reduction (ADNOC)	Dubai Autonomous Transportation Strategy (RTA Dubai)			
Dubai Integrated Energy Strategy (DSCE)	EGA Optimization (EGA)	Dubai Green Mobility Initiative (DSCE)			
TAQA ESG Strategy	Arkan Cement Optimization (Arkan)	Etihad Rail National Railway Program (Etihad Rail)			
	Emirates Steel Optimization (Em. Steel)	Dubai Comprehensive Flexible Mobility Plan (RTA Dubai)			
	Sustainability Assessment f/ Manufacturing (MOIAT)				
	UAE Green Business Toolkit (MOCCAЕ)				

Legend

Federal Level
Emirate Level
Company Level

PREVIEW

Based on the third and most recent Nationally Determined Contribution of the UAE submitted to the UNFCCC, the building sector represented 27 per cent of overall greenhouse gas emissions in the UAE in 2019. It will however deliver 85 per cent of the total emissions reduction targeted by the UAE for 2030.



This highlights the critical role of the sector in reaching the country's climate targets and emphasises the importance of identifying the different enablers required to unlock those targets.

Setting the Scene – Global Targets

During COP26, 45 world leaders launched the Breakthrough Agenda, with the aim to strengthen international collaboration for decarbonising high-emitting sectors including transport, power, hydrogen, steel, and agriculture.

At COP28, 25-plus countries, led by France and the Kingdom of Morocco, will come together to launch a collective platform to accelerate action on buildings, focused on the goal that **“near-zero emission and resilient buildings are the new normal by 2030”**. This [‘Buildings Breakthrough’](#) will see countries collaborate to harmonise global standards, aggregate sectoral demand, enhance private financing, coordinate research and technology deployment, and bolster international capacity-building, with a special emphasis on strengthening building codes.

PREVIEW

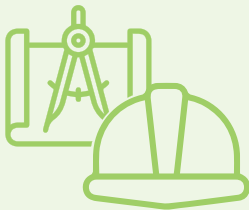
To complement the Buildings Breakthrough, many businesses, cities and other non-party stakeholders are leading voluntary action to support the transformation of the sector by setting internal targets or aligning with existing global initiatives such as the [2030 Breakthrough](#) as well as the Race to Zero Campaign, which requires a clear pathway to net zero by 2050. These actions are essential for providing governments with the confidence to shape a supportive regulatory, policy and finance environment.

The 2030 Breakthrough asks that “all new projects completed from 2030 are net zero carbon in operation, with >40% reduction in embodied carbon”

Race to Zero members also include:

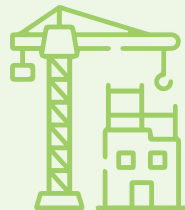
48%

of major architects
and engineers



19%

of major construction
companies



27%

of cities



Setting the Scene – Local Targets

The UAE Nationally Determined Contribution (NDC), third update, adapts the year 2019 as a baseline for its national and sectoral reduction targets. It aims for a 43 metric tonnes of carbon dioxide equivalent (MtCO₂e) reduction target by 2030, across seven sectoral targets, where the building sector represents the most significant area of improvement at 35 MtCO₂e, or 85 per cent of all emission reductions by 2030. **Key planned policy interventions include (UAE Third NDC, 2023):**



Revise existing building codes to increase the efficiency of new buildings



Roll-out of building energy labels



Increase in rate of retrofitting



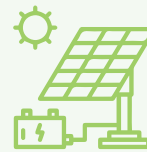
Accelerate the installation of solar thermal and efficient cooling systems (such as district cooling)



Pricing reform for residential, commercial and industrial power consumption



Encourage energy conservation



Introduce net and gross metering for distributed renewable energy

Consequently, buildings provide the opportunity to secure just over 42 per cent of the energy intensity improvements needed by 2030 to stay within the 1.5C target.

Buildings provide the opportunity to secure just over 42% of the energy intensity improvements needed by 2030 to stay within the 1.5C target

PREVIEW

The National Energy and Water Demand Side Management Programme 2050 was developed to target the most consuming sectors in the country (Built Environment, Transport, Agriculture, and Industry) aiming to reduce energy demand by 40% and water demand by 50% by 2050, which will support cost reduction, investment, and sustainability.



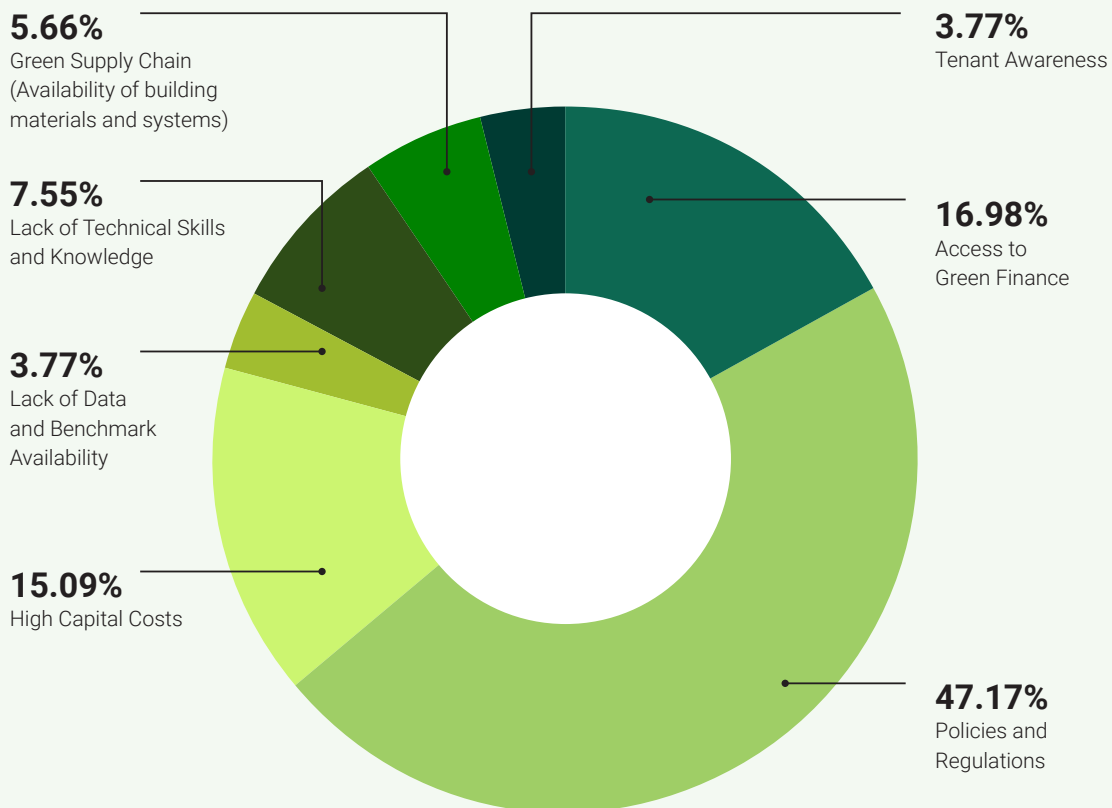
The UAE Built Environment Blueprint - A Sneak Peak

With the above in mind, H.E. Razan Al Mubarak, UN Climate Change High-Level Champion, COP28, whose mandate is to mobilise global non-party stakeholders for global climate action, engaged with the CEOs of the UAE’s leading developers in a roundtable during a public engagement event in Dubai on 29 May to discuss key opportunities to enhance local efforts in the sector to decarbonise.

The roundtable highlighted a common desire for the leading businesses to raise ambition in decarbonising the built environment as well as shared challenges and the existence of many best practices already applied by different organisations in the UAE.

This led to the creation of a working group comprising representatives from the leading organisations, the Climate Champions Team and led by the Emirates Green Building Council, to map the challenges faced by local developers and find the key enablers to unlocking greater climate action. The chart below summarises the findings of a survey conducted among over 75 representatives from the industry, revealing that Policies and Regulations are seen as the key enabler by non-state actors of the built environment.

Key factors for unlocking climate action in the UAE built environment.



Survey conducted among 75 key industry representatives, 2023

PREVIEW

This effort falls within a bigger framework of ongoing consultations and business engagement led by the Ministry of Climate Change and Environment through the [National Dialogue for Climate Ambition](#) as well as the Ministry of Energy and Infrastructure’s recent work and publication of “The Global ABCs Regional Roadmap for Buildings and Construction in the Arab Region” (April 2023).


This report will summarise the key findings of this working group, covering key opportunities across core dimensions of the building sector:

Area	Policy	Building Materials and Systems	Green Finance	Data	Skills
	Enablers	Building codes	Materials sustainability specifications and market availability	Access and availability of green finance	Data on historical and existing building performance
Energy policy		Systems performance specifications and market availability	Centrally endorsed sustainability standards for green building finance	Data on building retrofits	Skills for reporting
Building performance requirements			Historical data on building sustainability performance Risk return of green building finance		

The report will also highlight current efforts being undertaken by the leadership working group in collaboration with the UAE Government, as well as the next steps that need to be taken, in order to co-design and implement both the policy and market enablers identified under each of the areas listed above.

Upcoming Policy Enablers – A Sneak Peak

Many of the enablers identified by the private sector are already covered by the existing portfolio of initiatives and policies being developed by the government. More specifically, the Built Environment DSM Programmes target a reduction of 51% in energy and 40% in water by 2050 compared to BaU scenario by implementing the below initiatives:

 <p>Built Environment</p>	Building codes	Renewable energy	Facility management Non-revenue water [reporting]
	Building retrofits	Equipment standards	
	Efficient cooling	Efficient irrigation	

Since March 2021, when His Highness Sheikh Mohammed bin Rashid Al Maktoum approved the National Programme, the Ministry started working on various projects, policies and regulations, which include the following:

1. Green Building Code

The National Green Building Regulation (NGBR) mandates minimum energy and water standards for new buildings, aiming to ensure the implementation of sustainability measures without imposing limitations. Developed collaboratively through the National Green Code Committee, representing entities in each emirate, the regulation aligns with existing codes, and legislative authorities in each emirate must adopt and demonstrate compliance with the NGBR in their construction projects. The Building Codes programme is estimated to contribute to the total built environment energy savings by 18% in 2030 and 40% in 2050, improve air quality in construction projects by 95% and recycling of construction waste by 50%.

2. Building Retrofit Programme

The Programme aims to reduce energy and water consumption in government buildings by retrofitting the buildings that consume the most energy and water through the shared savings mechanism and the method of partnership between the public and private sectors (PPP). The Programme will cover 422 government buildings to reduce a minimum of 20% in energy and water consumption compared to the average consumption of the last three years. The Programme aims to reduce electricity consumption in the built environment sector by 7% equal to 7 TWh and water consumption by 196 Mm³ by 2030.

3. Policy Regulating Local Energy Market

The policy provides guidelines for the contractual framework amongst energy stakeholders and the various contracting mechanisms to consolidate the mechanisms of doing business, financing, and partnerships between the public and private sectors. This will encourage energy service providers and private sector companies to invest in government projects, with the goal of reducing energy and water consumption, carbon footprint, and operational costs in buildings. The policy has set objectives for the next five years including reducing water use by 23%, cutting down operational costs by 20% in federal buildings, contributing to clean energy by 5%, promoting the sustainability of buildings by an approximate 5-10%, and raising awareness of energy and water conservation and the importance of behavioural change. In the long term, the policy is projected to decrease the demand for energy in the building sector by 51% by 2050, contributing to the UAE's sustainable development.



ACKNOWLEDGEMENTS

Project Leadership:



Core Building Sector Partners:



Core Finance Partners:



Knowledge Partner:



Design and Production:





EmiratesGBC

مجلس الامارات للابنية الخضراء
Emirates Green Building Council

In partnership with



HSBC



**RACE TO
RESILIENCE**

RACE TO ZERO