





Introduction

This presentation has been prepared to review Sustainability and Green Building with the UAE with a particular focus on Green Building or Green Wash. The presentation focuses the drivers for sustainability in the UAE and the mechanisms for and against these drivers. A discussion of the review is highlighted and typical case studies are presented with a conclusion to the presentation.



United Arab Emirates

The United Arab Emirates consists of seven Emirates, which are Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaimah and Fujairah. The majority of construction is focused in Dubai and Abu Dhabi.

Dubai and Abu Dhabi have some of the most prestigious buildings in the world and given the hot climatic conditions the energy consumption and water demand are of paramount importance.



Sustainability - Green Building

It's critical to reduce building heat gain in the UAE. Therefore, to achieve a green building/sustainable design an integrated design team approach is required, ensuring the passive solutions are maximize before optimization of active MEP solutions.

Two of the main factors to consider in the UAE; building energy consumption which produces CO₂ contributing to climate change and the reduction of precious water in the region.



Mechanisms for Green Building

- Governments commitment towards sustainability (Kyoto Protocol)
- UAE Building Regulations & International Building Codes
- LEED Ratings
- Estidama Pearl Compliance
- Suppliers and Green Equipment
- Professional Institutions
- Conferences / Awareness
- Zayed Prize













Mechanisms against Green Building

- Government Agreements
- Slow Regulation Introduction
- Assessment Method
- Utility Supply Authorities
- Developers and Owners
- Value Engineering (Design and Contractor)



Typical Green Building - Masdar City

- Zero Carbon & Zero Waste City
 - Concentration on Energy and Water conservation, Waste management, Smart Grid Technologies, Transportation and Renewable Energy Generation
- 100% Renewable Energy-Powered Community
- Concentrated Solar Power 100MW
- Carbon Abatement Carbon Capture and Storage (CCS)
- Photovoltaic Solar Energy and on/off shore wind energy
- Wind farm in the Seychelles 25% of the island's energy needs



Typical Green Building - ADEC Headquarters

- Passive and Active Solutions
- Photovoltaic Panels (Electricity)
- Combined Heat & Power
- Absorption Chillers
- Solar Collectors
- Chilled Beams
- Mixed Mode Natural Ventilation
- Zero Emission Building
- Estidama 5 Pearl Compliance



Typical Green Wash – UAE

- There are a number of projects in the UAE which are Green Wash
- The mechanisms identified are working against building green
- Developer and owners are constructing to the minimum standards
- · The market is taking advantage of ambiguity
- Renewable solutions are difficult because of increased capital cost
- Education is required throughout the whole region
- Large emphasis on water conservation more than energy



Discussion / Conclusion

- •Sustainability in construction is hugely popular in the UAE
- •Mechanisms For Green Building
- •Mechanisms Against Green Building
- •The mechanisms for are actually working against sustainability
- •Masdar City Zero Emission, Zero Waste City
- •Green Wash
- •Taking the right steps, in the right direction but slowly

