

The green mile

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Abu Dhabi's aim to create a sustainable city with a minimal carbon footprint is being actualised at various levels — wind and solar power projects, waste management and long-term investment in energy from renewable sources, creating a building code that awards energy efficiency and training residents to use energy effectively.

The pride of place goes to Masdar, the city visualised in 2006 and formed with partnerships with multinational energy, automotive and information technology companies to showcase a city that uses low-carbon technologies.

"Renewable energy is a core of both of our academic and research activities at Masdar Institute. This 7 per cent requirement of the government of Abu Dhabi has provided impetus for large-scale development of renewable energies, such as our Shams 1 Project, which is a 100 MW solar power plant," says Dr Fred Moavenzadeh, President of the Masdar Institute of Science and Technology, in an interview with Gulf News.

Up to a quarter of the UAE's power requirements could come from nuclear energy by 2020, Ambassador Hamad Al Kaabi, UAE Permanent Representative to the International Atomic Energy Agency (IAEA) told the WAM news agency, "Nuclear energy emerged as the right choice for the UAE to diversify its electricity supply. In making this choice UAE recognised the importance and responsibility of ensuring highest standards nuclear safety and protection of the public as a fundamental principle," he said.

Four nuclear energy plants are planned for construction, with the first plant to be connected to the Abu Dhabi grid by 2017.

That is not all. Estidama, created by Urban Planning Council (UPC) is Abu Dhabi's answer to US's Leadership in Energy and Environmental Design (Leed). This month a batch of 186 architects and engineers in the UAE have become Estidama Pearl Qualified Professionals. A construction rating programme, courses for suppliers and procurement managers to encourage greater use of high-efficiency fixtures, energy-saving lights and low-flow toilets are some of the plans. One pearl is a requirement for all new buildings in Abu Dhabi now. Two pearls are required for all new government buildings. Ratings can go up to five pearls.

Steadily, residents are getting more involved in this quest for green living. Recently, Abu Dhabi's Haidar Taleb, a 47-year-old man was in news for creating a Guinness record when he took up a Masdar-sponsored 200-mile (around 322km) journey on a solar-powered wheel chair. Masdar Institute Associate Dean of Research and Associate Professor Dr Scott Kennedy says: "We are not only studying sustainability, but we are also living it and experimenting with it." Student residents are currently involved in a project testing different incentives for energy efficiency.

Kennedy adds, "We are designing a web-based platform that will show students details of their energy use, comparisons among their peers. One group will receive no information, another will receive only information on the energy usage and relative performance compared to their peers, another will receive a time varying electricity price and the last will receive an allocation of 'energy credits'."

The experiment tests the effectiveness of different incentives. Kennedy says, "Creating the proper system of incentives for sustainable living could one day help Abu Dhabi and the wider UAE reduce their global ecological footprints."