



Mario Seneviratne



Douglas Kelbaugh

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"It's a missed opportunity not to use these collectors on more buildings in Dubai to provide domestic hot water. Perhaps the reason that workers' houses have them is because they are more concerned than other owners about utility costs. I'm surprised that there are not more of these simple active and passive collectors on the roofs – they're all over the rest of the world where there's typically less sun than here. They're very easy to retrofit, especially on flat roofs – you can set your collector to face south at the optimum angle, which is based on the latitude."

Kelbaugh explains that the Middle East's greatest barrier for renewable technology is the price of energy. He says: "Energy is priced low here – it's artificially cheap and can lull the people into not caring, as well as promoting waste and discouraging innovation."

LEADING BY EXAMPLE

Seneviratne explains that green retrofits are far more common in North America, and that a number of iconic buildings – including the UN headquarters and New York's Empire State Building – are receiving sustainable facelifts.

Yet on the positive side for the UAE, he reveals that 28 buildings in the Emirates have registered to be certified under LEED EB or EBOM (Existing Building Operation and Maintenance). There is also an incentive programme for retaining the structure of the building, as he explains: "LEED Building Design and Construction covers new buildings and major refurbishments. If you retain things like the shell, the façade, the floors, then you will get credits."

LEED Commercial Interiors is another section of the code that can apply to retrofits, and Seneviratne points to a successful case study. "A great example of how to retrofit is the TECOM headquarters building in Dubai Media City. The management understood the requirements of the building and completely retrofitted it with new lighting, new air conditioning, etc. It achieved LEED Platinum status – the highest ranking."

Seneviratne believes that LEED-compliant retrofits will become much more prevalent. "Once the awareness and education reaches a certain level then people are going to ask for it. People will want to say 'I'm living in a LEED building'. These buildings will have an edge over the others."

BEHAVING BETTER

The energy efficiency of a building is not just down to engineering techniques; a crucial part of the equation is the behaviour of the occupants. Seneviratne says: "If you create or retrofit a building to be green, the occupants need to be part of the process. People have got into bad habits here. You can put slow-flow water fixtures on the taps, but if the occupant keeps the tap running while they're making a coffee, then any saving that you've done is gone. Likewise, if you have low-energy lighting but you keep the lights on in the night then that efficiency that you have earned goes out the window."

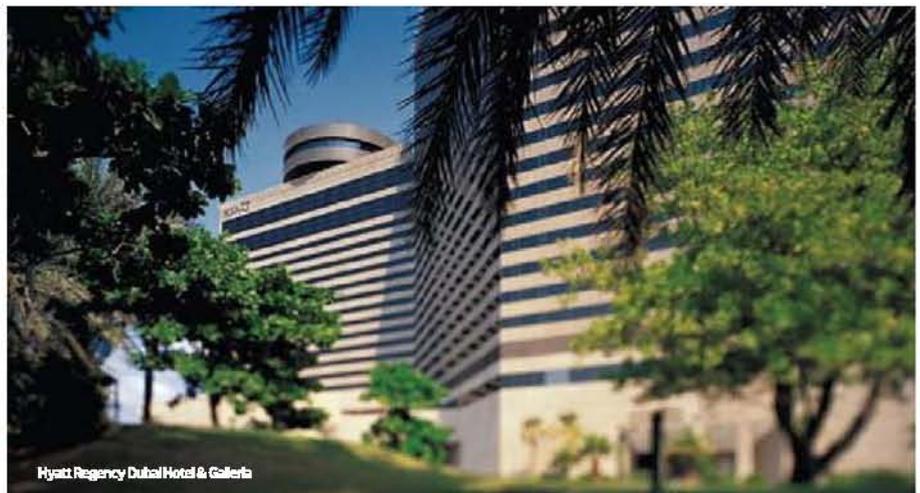
"Over here, the awareness of sustainability is not as high as in other parts of the world, and it may take some time for that awareness to spread. Plus this region lacks the incentives and

facilities to enable greener lifestyles, such as recycling programmes. If you're an expat Canadian or German and you led a sustainable life back home, then you should be doing it here as well. We need to have the systems and rules in place to make this happen.

"The government has the biggest role to play, but it can also come from NGOs, large corporations, utilities, social networks – these are all vehicles that can raise awareness. Generally awareness programmes created by the government are accepted well."

He suggests that utility companies should offer monitoring systems to spot energy wastage. "If a building's energy bills are increasing then that could mean that an appliance is deteriorating and needs to be replaced. The utility provider could run a survey across every building and see where the energy has increased recently. In this digital age, we have the tools to do this."

Kelbaugh believes that companies could start by setting regulations to save energy and money. "Companies should set regulations about thermostat levels – rooms are often kept very cold here. This habit wastes a lot of energy and needs to change. Before you retrofit a building you should retrofit behaviour. That doesn't cost a dirham." ●



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