

Older buildings can still go green, experts say

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DUBAI // Retrofitting buildings to be more environmentally friendly can have a greater impact than building new "green" structures, experts said yesterday.

Green retrofitting, in which new technology is added to old features, is becoming a trend in industrialised countries where it is supported by government incentives, said Mario Seneviratne, the director of the Dubai-based Green Technologies.

His company has been hired to do retrofit work on the Mall of the Emirates. Mr Seneviratne said the mandate was to give the "energy-intensive building" a 25 per cent reduction in energy use and a 20 per cent cut in water use.

Green Technologies is seeking a gold certification the second highest from the Leadership in Energy and Environmental Design (Leed), a US-based organisation that sets standards for environmentally sustainable building construction.

In Abu Dhabi, the Government is also thinking of ways to encourage retrofits. The Urban Planning Council plans to launch a voluntary, specific building standard, called the Pearl Rating System, next year.

Meanwhile, the planning council is mulling the specifics of a programme to target existing buildings, said Gregory Acker, the senior planning manager.

"It is a programme which we hope will cast a bigger net and include more buildings in Abu Dhabi," Mr Acker said. "It is responding to the need to cut electricity and water consumption as soon as possible."

He said the council wanted to concentrate on existing buildings because there were fewer new structures being built due to the economic downturn.

Details of the programme are still being worked out, but it would probably start by focusing on government buildings, he said.

"Our big effort between now and summer is to do audits on all government buildings and to have a database of consumption patterns," Mr Acker said.

Mr Seneviratne, speaking at the Green Retrofit Conference and Workshop, said Leed's category for existing buildings was increasing in popularity.

The number of buildings seeking certification in this category increased by 72 per cent from 2007 to 2009 and now stands at 4,300 buildings. Twenty-nine are in the UAE, but only one has achieved a rating so far – the Chamber of Commerce building in Dubai.

The developer Tecom Investments, which owns and operates Dubai's knowledge-industry free zones, is pushing for Leed status as well and has been running retrofit initiatives for three years.

Sougata Nandi, the director of the company's sustainable energy and environment division, said the programme had focused on incremental change rather than wide-ranging, expensive solutions.

The priority in any retrofit programme, he said, was to optimise the operation of equipment within the building. He said his company saved 10 per cent of energy costs more than Dh5 million (US\$1.36m) by doing this.

"This does not cost you any money," Mr Nandi said. "It is not just about having the right equipment but also the people who run the equipment need to understand this [need for efficiency]."

Other ways to gain efficiency include improving lighting by phasing out incandescent bulbs; smart ventilation and thermal comfort; water-efficient plumbing; and making buildings better insulated. Mr Nandi said green retrofit programmes made financial sense in the UAE because most buildings were not designed to be energy and water-efficient.

"Most buildings in Dubai are over-designed even today," he said. "Consultants are playing it safe and the price for mitigating this is paid by the landlord."

A typical example is air-conditioning units, which are often scaled beyond what the building needs, Mr Nandi said. He said on one project a company cut the proposed cooling load by half.

Mr Nandi said another way to improve efficiency was having a building owner and a contractor share the savings achieved through improvements. "This concept is in existence in the UAE but is not as well spread as one would like it to be," he said.

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