



Energy rating not the only measure of green

While some bodies compete over energy ratings; others are developing much broader measures of sustainability, writes **Tina Perinotto**.

The last 12 months have brought their own sea change to sustainable commercial and residential development. Not all of it is about peace with nature and universal harmony.

While green used to be a dirty word, today the competition and one-upmanship in the sustainability arena is feeding an undercurrent of tension.

Residential developers are now touting homes where you can harvest your own rainwater, create your own electricity and treat your own waste.

In new office developments, tenants are asking hard questions about energy consumption, indoor air quality and water-saving features.

And just in case you thought green was an optional fad, the Australian Building Code has brought out minimum energy standards for housing — and will next year do the same for commercial buildings.

These are not mandatory. Well, sort of. The Australian Building Codes Board puts them up for the states and territories to adopt voluntarily. Of course it's not a good look if they don't.

So far, five states are on board, although Queensland and the Northern Territory dragged the chain a little.

The ACT and Victoria have abstained because they already have higher energy standards in place — the BCA's rating is for just 3.5 stars.

Causing some amusement among dispassionate onlookers is the tussle to be toughest between NSW and Victoria, with the latter plugging for a five-star energy mandate on housing.

The NSW government initially stole the march on energy rating with its Sustainable Energy Development Authority's energy-rating system, which it hopes will be introduced throughout the country.

The Australian Building Code

Board's Ivan Donaldson says the energy codes have not been easy to introduce because they are climate-based, with Australia broken into eight separate zones, so that there is at least an attempt to tailor energy-efficient solutions for different climatic needs.

Meanwhile, many local councils throughout Australia have taken their own high road on energy and introduced their own specific codes.

It's enough to drive the development industry mad — suppliers in particular, which must provide different insulation qualities in materials for different areas, for instance.

But energy is only one measure of sustainability. The ABCB's Donaldson acknowledges there's so much more. He says a social measure has equal place in the equation.

"If we're talking about sustainability, shouldn't we talk about the interaction between people and the environment?" What about the ageing-population time-bomb? he asks. "It has ramifications for disability access and the way public buildings are designed and the way private homes are built. "It's the public and private nursing-home industries — they're the ones seeking these changes. It's about a more cost-effective way to deal with an increasingly aged and infirm population," he says.

The NSW Urban Development Institute of Australia's president, Roger Collins-Woolcock, says his members are concerned about sustainability, but it needs to be achieved in a way that does not add to project time and to cost.

But this seems inevitable.

RMIT University adjunct professor Alan Pears is one of the more

controversial experts in the field. The development industry, especially in the residential field, won't like what he says.

Pears says there are a lot of hidden energy costs that need to be unravelled in development before any true measure of sustainability can be arrived at. A lot of it relies on passing on the true cost of development to the consumers.

Most people would have noticed that the big new houses in the suburbs have been getting bigger.

This is because they're getting cheaper — about 400 square metres for the previous cost of 300 sq m, "So that's seen as good value for money," says Pears.

However, look a little deeper and longer into this equation and a different picture emerges.

The home buyer will rarely take into account the cost of getting it cleaned, the cost of replacing 400 sq m of carpet instead of 300 sq m, the cost of painting, heating, cooling and lighting.

Technology has played a part because many of these houses extensively use composite materials such as plywood, MDF and fibre cement, which are cheaper.

Even the design strategy comes into it, because making a house two storeys means the roof is smaller, and therefore cheaper.

But buyers will often spend big sums of money after purchase installing pergolas and sun shading to deal with insulation issues, Pears says.

"Once you start looking at the long-term cost of these large homes, you realise the upfront cost is not really what you should have looked at."

Meanwhile, the building industry has done its research and finds people will respond to the satisfaction of

'Different energy-rating codes drive the development industry mad.'



Australian Financial Review Thursday 24/7/2003
Supplements Page 10
Circulation: 85,000
Size: 655.36 sq.cms.

having more space, he says.

But it is exploiting the inexperience of buyers, because most people only buy a home once or twice in their lives — and no one teaches these things at school . . . perhaps they should, he argues.

With the introduction of tougher energy codes in housing, developers are complaining that the costs are greater because they need to provide sunshading and thicker glazing (for instance) upfront.

But that is simply shifting the costs up front where they should be, says Pears.

Another voice of warning in the commercial development world comes from Lincoln Scott's Che Wall, who worries that while the five-star energy rating aims are to be valued, the "downside is that it only encourages people to think about energy". What about water usage, waste and the broad spectrum of sustainability? he asks.

But he can understand why energy has the limelight, because it is one of the easiest things to measure.

And in recent months — because the green industry changes "almost on a daily basis," he says — it is

tenants who are providing the main drivers. And tenants want outcomes they can measure.

The issue is a bit of a "hot potato", says Wall.

But there is excellent news from an environmental perspective, he says.

At last, with the establishment of the Green Building Council, headed by Maria Atkinson, an all-round sustainability tool is on the way.

Soon to be announced, the tool is expected to measure water and energy use, pollution, health and well-being of occupants, transport and management

'There are a lot of hidden energy costs in development.'

aspects of a building.

A buffer to the competitive and contentious elements of green development are the types of partnership that are breaking down traditional barriers.

Wall cites Melbourne's RMIT as heading this, especially with the work of Richard Sebo, whose job is to lead research which is "actually relevant to industry".

Through this work, the industry will finally get a database of sustainable materials, for instance, that are graded and sourced.

Wall has a problem with the number of databases and tools being developed by private firms and retained for their proprietary use.

"If you want to move forward, then it doesn't help when those things are in private ownership.

"It's almost an IP [intellectual property] grab . . . the notion that you're going to be more favoured in your next commission. That's fine to an extent, everyone has a right to make a dollar, but there are some things that really should be in the public arena."

Certainly there are examples emerging of huge co-operation between disparate parties.

For instance, in a project to improve indoor air quality in buildings, the CSIRO will join with the Queensland University of Technology, Bovis Lend Lease, Arup, the Queensland government and Co-operative Research Centre for Construction Innovation, with funding from the federal government.

The CRCCI will also be working on how sustainability can be worked into the Australian Building Code.

And Bovis Lend Lease recently signed a memorandum of understanding with green group Planet Ark for sustainability input into future projects.

BLL's Simon Hardy said more clients are asking for sustainability outcomes in their projects and it seemed logical to involve a group that specialised in that area to contribute.

In developing The Bond, Deutsche's new office building in Hickson Road, Sydney, BLL asked Lend Lease staff, the future occupant of the building, what was their top priority.

A range of environmental issues emerged, but chief among them was indoor air quality.

The Bond, therefore, will feature extensive use of winter gardens, which will double as breakout work spaces, a large atrium and, new to Australia, chill beams.

These beams, brilliant in their simplicity, are like long, wide and thin radiators which pepper the interior cavities of the ceilings.

When filled with cold water they create a convection system drawing up hot air and dumping cool air in a much more even spread than normal air-



Australian Financial Review Thursday 24/7/2003
Supplements Page 10
Circulation: 85,000
Size: 655.36 sq.cms.

conditioning. Frequent purging of stale air will complete the package and, in the meantime, save significantly on energy.

The building will be Australia's first SEDA-rated five-star commercial building.

James Grose, principal of Bligh Voller Nield, says getting the right mix on a large scale will be a process of incremental change.

"The problem with sustainability is that people seem to think of it in extremes, and that is not going to get us anywhere. Other people see it as a 'clip-on', as a marketing tool.

"Sustainability in the delivery of buildings and infrastructure to cities has to be embedded, implicit, not an attachment you can market, and not dictated by the green lobby."

Eventually, it will create different-looking buildings, says Grose.

For instance, the BVN-designed National@Docklands, for the National Bank, will stand out from other buildings because of its solar chimneys, unusual screens and opening windows.

Eventually, sustainability will become as embedded in our cities as the idea of unleaded fuel, says Grose.

High standards

- Minimum energy standards for housing are being introduced around Australia, with commercial buildings to follow.
- A tool is being developed to measure water and energy use, pollution, health and well-being of occupants, transport and management aspects of a building.