

DESIGNS ON EIGHT-STAR RATING



HIGHTON HOUSE | THIRD ECOLOGY ARCHITECTS

Sustainable design is at the forefront of modern living as home owners try to minimise their environmental footprint and reduce energy costs.

The director of Gedding architecture practice Third Ecology, Mark Sanders, says most people are now building houses to maximise their energy performance. "Everyone knows what [sustainable design] fundamentally means and that it has environmental impact, less running costs and a more comfortable home," Mark says.

"It is about having living areas facing north, more insulation, double glazing and solar panels."

All new houses, renovations and additions must meet a six-star energy rating under the National Construction Code. This considers the thermal performance of a house and includes either a solar hot water system or a rainwater tank for toilet flushing.

Mark, who started Third Ecology in the mid-1980s, designs properties that achieve

a seven- or eight-star rating. He has won numerous awards for his projects, including Abode's Sustainable House of the Year for a Barwon Heads beach house and the Master Builders Association of Victoria's Sustainable Energy House of the Year for this region.

Using passive solar energy is a key component of his design principles, but the advent of new technologies is also changing the way households consume energy.

Mark predicts the emergence of domestic batteries to store solar power will be the next major development.

Battery technology for houses is already available, with a small battery costing about \$10,000-\$12,000. These work in tandem with solar panels, storing the electricity during the day for use at other times.

Mark has already future-proofed a few houses in Gedding by putting in inverters so they have the capacity to install a battery down the track.

"The move is to electric homes because

natural gas, even though it has a lot less greenhouse emissions, is still a fossil fuel," he says. "I reckon within two or three years, people will start putting [batteries] in."

Mark believes a 10-kilowatt solar system and a small battery would be enough to make a house self-sufficient.

He says the only hurdle is that currently in Victoria there is a five-kilowatt feed-in tariff limit on solar systems for houses with single-phase power.

Like most new technologies, residential batteries will not get cheaper over time, making them affordable for a wider market.

Solar technology once cost \$10,000 per kilowatt and that's now come down to about \$1000.

Mark says double-glazing also used to cost twice that of an ordinary window, but it too has dropped in price.

Even once a house is built, he says there are still plenty of ways home owners can do their bit for the environment, starting with growing food in their own backyard. ■

NICOLE MAYNE

TOP TIPS FOR Energy Efficiency

Position living areas and large windows to the north

Minimise windows to the west and east

Use eaves, pergolas, awnings and external plantings to keep the sun's heat off the house

Install good insulation, particularly in the ceiling

Ensure you have cross-ventilation

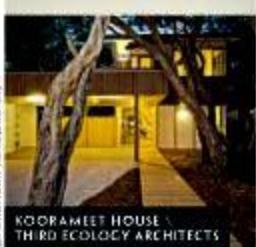
Draught-proof external doors and windows

Install ceiling fans

Choose energy-efficient appliances

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INTERVIEW PHOTOGRAPHY

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