

Proper planning screens greenhouse emissions

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TRADITIONAL residential planning and design is being turned on its head with new research suggesting well-designed suburbs can save residents up to 20% on their annual power bills.

The findings, released by Queensland-based Cooperative Research Centre (CRC) for Construction Innovation, showed proper subdivision planning was the most effective way to reduce greenhouse emissions and energy usage in the average home.

New building regulations have been widely introduced recently mandating the use of energy efficient materials and design principles.

However, developers – driven by "maximum yield" philosophies that lead to an inexorable increase in high-density developments – were creating future problems for builders and homeowners, according to CRC for Construction Innovation researcher Michael Ambrose.

"There's good evidence that by doing this, developers get less money for the land, because building costs are higher to achieve the required energy rating [under the new regulations]," he said.

"There's a strong message from consumers today that they want to live in energy-efficient homes and both builders and developers are now starting to get it."

By aligning houses to take advantage of natural heating and cooling, and combined with a solar hot water heater, Ambrose said greenhouse gas emissions per house could be slashed by up to two tonnes per year.

"A typical Queensland subdivision can achieve a 3.5 star energy rating for the average home – but one laid out for energy saving can achieve 4 or 4.5 stars per home, simply by better planning," he said.

The CRC team is also researching wind patterns in urban zones in the hope of finding ways to lessen the need for air conditioning units.

CRC for Construction Innovation's model for housing efficiency is being adopted in two urban developments in Queensland at Brookdale and Kelvin Grove, with greenhouse emission reductions at the 8000-home Brookdale settlement forecast at 16,000 tonnes a year, the equivalent of taking 3000 cars off the road.

CRC for Construction Innovation chief executive officer Keith Hampson said sustainability was the new mantra for builders and developers.

"By working closely with our partners, priorities are determined that enable us to target this research to industry needs," he said.

"The important practical outcomes generated by the project will be shared with industry through publications and seminars."

