

Stars in a galaxy too far

Most new homes don't measure up to their energy rating, building industry experts warn. Since the start of May, all new houses and renovations in Victoria must reach six stars, but because of shoddy insulation and inadequate draught sealing, householders' bills may continue to rise.

Despite steadily lifting the stringency of energy ratings, the industry's regulators have not enforced those standards in the way homes are built.

There is no inspection or auditing process to ensure houses comply with efficiency specifications.

House energy consultant Blair Freeman, from Energy Leaks, says eight out of every 10 residences he audits have poorly installed or missing insulation — especially in walls, around window frames and towards the perimeter of ceilings.

"People are paying for a five or six-star home and not getting it," he says.

"The rating software is a great start — it gives you an assessment of the drawings — but no one assesses the home."

Mr Freeman photographs the insides of houses with a thermal camera. If it's warm outside, the images show hot spots where insulation is gappy. Too often, he says, the new houses in his photos glow like hot coals.

"It's a big problem and it's all to do with poor installation of insulation."

Similarly, draught-testing company Air Barrier Technologies has found air leakage in new homes to be five to 10 times worse than expected under the star-rating models.

Wayne Liddy, a building surveyor and former president of the Australian Institute of Building Surveyors Victoria, says he's concerned new houses don't meet the efficiency expectations of home owners.

Building surveyors assess compliance with the star-rating paperwork, but do not check those features in the fabric of

ALL NEW HOUSES AND RENOVATIONS IN VICTORIA MUST REACH SIX STARS, BUT MANY FAIL THIS REQUIREMENT.

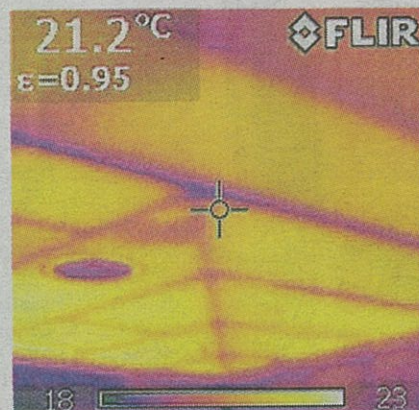
the building itself. They are not required to monitor the quality of the installation of insulation or draught sealing.

"There's a big gap in compliance," Mr Liddy says. "We could have a very embarrassing situation when mandatory disclosure [of energy ratings at the point of sale or lease] comes in. Most houses that have a building permit with a report giving them five stars may be lucky to get to two stars."

But Victorian Building Commissioner Tony Arnel says people must understand that the rating scheme is a design tool, not an on-the-ground assessment. "The quality of building varies, like everything in life," he says.

"Where houses are built that have more air gaps and leakage issues, then potentially they will be below the five-star standard.

But that's not to say those houses don't



HOUSE ENERGY CONSULTANT BLAIR FREEMAN PHOTOGRAPHS THE INSIDES OF HOUSES WITH A THERMAL CAMERA. TOO OFTEN, HE SAYS, THE NEW HOUSES IN HIS PHOTOS GLOW LIKE HOT COALS.

comply with the regulations."

The Building Commission conducts "desk-top audits" of compliance with the rating standards, Mr Arnel says. "Quality assurance is a contractual responsibility between the owner and the builder. That's what you pay for."

Kristin Brookfield, building and environment director of the Housing Industry Association, says she has not seen any evidence of a systemic problem. "We will always support the view that our members understand their obligations and are delivering homes to the expectations of the law and the customer."

Even so, Ms Brookfield says she would not be surprised if some states introduced an extra building inspection targeting energy efficiency measures. "But it needs to be done in a way that doesn't slow everything down and cost thousands of dollars," she says.

Misgivings about the scheme's governance extend to the oversight of ratings assessors.

Until March this year, Sustainability Victoria was responsible for supervising the performance of accredited house energy raters.

However, according to a spokesman for the agency, due to "resource constraints", it did not audit any ratings after June 2004, a gap of nearly seven years.

The role has now been outsourced to the Building Designers Association of Victoria and the Association of Building Sustainability Assessors.

Architect and environmental design consultant Chris Barnett, of Third Skin Sustainability, says this kind of ineffective regulation is undermining the rating scheme's credibility.

To improve compliance in the industry, Mr Barnett says, regulators should urgently consider a range of changes, including random "as-built" audits and additional checks by surveyors or sustainability assessors, along with training and education campaigns for builders.





Shock of the reality gulf

Chris Jensen, from Greensphere Consulting, has conducted more than 10,000 house energy ratings. He also lectures in building energy modelling at the University of Melbourne's architecture faculty.

But when he came to renovate his own home in Port Melbourne, he was shocked at the disconnection between the software modelling and the finished product.

"We're at lock-up stage, and I could have put cheese in the walls. There's no point at which the energy efficiency measures in the building really get checked. As the builder, I'm just expected to have met that standard because that's what the building permit states," he says.

He says that while he strongly supports the energy rating system, he is concerned about the way it translates into built houses.

"Insulation, gaps and cracks are the main issues, because you can't see them. The other big worry is that the report doesn't make it easy for builders to understand what's required," he says.

"My house could be built at two-star, if it wasn't done properly, and I wouldn't know. It really is that bad."



CHRIS JENSEN AT HIS PORT MELBOURNE HOME: "WE'RE AT LOCK-UP STAGE AND I COULD HAVE PUT CHEESE IN THE WALLS." PICTURES: CRAIG SILLITOE



WHY WE CAN'T SEE THE INSULATION FOR THE WALLS

Before the five-star regulations began in 2005, Tony Isaacs recalls, the building industry campaigned vigorously against the rules.

"There was a lot of fear among builders because it was a big change," he says. "But because of the size of the change there was also a view [in government] that, strictly speaking, there should be an additional inspection - particularly for insulation."

The extra check was not introduced. At the time, Mr Isaacs was the project manager responsible for the new regulations at the (then) Sustainable Energy Authority Victoria. He also developed FirstRate, the software tool commonly used in Victoria to analyse the efficiency of housing designs.

Now senior research fellow at RMIT's Centre for Design, Mr Isaacs says both the house energy raters and the actual buildings must be assessed more rigorously. "There needs to be some checking done of the people who do the ratings in the first place, to make sure they're accurate," Mr Isaacs says.

"Someone has to come up with the dollars to check the ratings and to check the buildings. The measures we've used so far have clearly got holes through which people can get away with building to a lesser standard, and unless we check them more rigorously, we just don't know how well they're performing."



CONTACT US

Editor
Miranda Tay
mtay@theage.com.au
8667 3093

Editorial inquiries
domain@theage.com.au
8667 2576

Advertising
Nikki Gia
Domain category manager
ngia@domain.com.au
8667 2540

Market Wrap
Chris Vedelago
cvedelago@theage.com.au
8667 2647

Secret Agent
Marc Pallisco
marcpallisco@gmail.com

COVER PICTURE
A THREE-BEDROOM VICTORIAN IN AUSTIN STREET, SEDDON, PASSED IN AFTER A SECOND VENDOR BID FOR \$620,000. THE RESERVE IS \$685,000. PICTURE: CRAIG SILLITOE