Case Study

Scorecard solves energy puzzles

Summary

- An efficient heating and cooling system and Seren's ability to close her house off into zones pushed her rating to 7 stars.
- Seren's home is also her office, so it needs to be comfortable year-round.
- Draft sealing will be a low-cost way to bring the house up to a higher star rating.
- Getting the house up to 10 stars wouldn't be nearly as expensive as Seren expected.

When Seren moved to Geelong this year, she realised that if she didn't act quickly, energy use in her new home was going to be much higher than it was in the inner-Melbourne flat where she'd previously lived. She set to work straight away to fix what she could and arranged a Victorian Residential Energy Scorecard assessment to help plan the next steps to a home with low bills.

Seren: Geelong

Seren found what she was looking for in the 1960s brick veneer house in the Geelong suburb of Highton: affordability, location and good materials.

"I grew up in and around houses of the same era, so there is a strong sense of nostalgia and a lot of good memories for me," Seren says. "I really liked the layout, aspect and location as well."

"I had been living in a modern one-bedroom flat in North Melbourne which was very energy efficient but was too small for me and didn't fit my lifestyle. I wanted a garden again and space to grow my own food, which this place will allow me to do."

She liked the sense of space the three-bedroom, 122-square metre house afforded for a single occupant, but being in an original unrenovated condition, it clearly needed improving. Making it more comfortable in the depths of a Victorian winter would be a priority.

There was only a very small amount of insulation in the roof, no wall insulation, some floor insulation which was coming away from the joists, and single glazing. On top of that, she quickly found the reverse cycle air-conditioner wasn't working as it should, the roof leaked, the unflued gas heater in the living room had to go and the gas hot water service was sending brown muck through the shower.

She quickly went to work on the place, removing the gas heater, replacing the clapped-out gas hot water service with an instantaneous one, installing insulation batts in the roof and buying efficient appliances for the kitchen and laundry. With quite a bit more to do, the visit by Scorecard accredited assessor Ratko Mrkogaca came at just the right time.

He checked the house from top to bottom, measuring and recording key features and delivered Seren quite a surprise.

"I was flabbergasted," she says of the score of 7 stars out of 10 that the assessor gave her house. "I had assumed that my home would have a low rating, partly because of the

Victorian Residential Efficiency Scorecard
STAR RATING

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poor comfort level, but the few things I had already done had helped to contribute to the relatively high score."

The main area for improvement on the Scorecard is the building shell, which directly affects heating and cooling a home and includes windows, walls, floor insulation and draught proofing. Having a well-sealed home means it can retain heat in winter and coolness in summer longer, which means greater comfort, less energy spent on heating and cooling, and lower bills.

Seren's upgrade means she can already keep energy costs down by using her efficient heater and shutting doors so she's only heating the lounge and dining area.

Ratko recommends that Seren look closely at all parts of her house and close off any unnecessary gaps or holes, including sealing wall vents, fitting draught stoppers to exhaust fans, weather seals along the bottom edge of the entry door, removing an unused cat flap and filling in a flue in the laundry ceiling.

While noting her good work in insulating her ceiling, the assessor recommends that more insulation be added and the walls and floor insulated to lift the thermal performance of the house. The windows are also in need of improvement, with single glazing and aluminium frames transferring energy in the wrong direction for comfort and energy efficiency. Ratko recommends double-glazed windows and heavy drapes with pelmets to prevent heat loss.

"I want to direct my funds into the things that are going to make the most difference to energy efficiency," says Seren. "I work from home two days a week so it is important to me that the house is comfortable and sustainable to live in."

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Ratko checks what difference the recommended energy efficiency upgrades will bring. Blocking wall vents to stop draughts, adding curtains, pelmets and blinds, changes to wall, floor and ceiling insulation and double glazing lift the home's energy rating to 8 stars and the building shell to a high 4 out of 5 rating, ensuring a change in energy use and comfort. The home's hot weather rating also improves, meaning that the house will be easier to keep cool in summer.

Installation of a 2-kilowatt rooftop solar system pushes the rating to 10 stars. With a solar PV system planned after the other upgrades, it looks like Seren is well on the way to owning a comfortable home with low bills.

Seren says the Scorecard assessment: "helped me think about all the smaller places that I can address energy loss or use, like insulating the pipes myself with a DIY product, installing fans with dampers, choice of window coverings and finding products to safely insulate my downlights."

"I'm pleased by how the small changes I've made already have improved my comfort and energy use and look forward to the comfort levels improving as I continue my upgrades. The biggest thing is that the Scorecard assessment has encouraged me to keep going with my plans," Seren says. "Knowing that if I do all the things on my list I could get this old house up to a 10 star energy efficiency rating is a big incentive, and it's not as expensive as I thought it was either!"

Worried about high power bills? Contact an assessor and organise a Scorecard assessment.