

Case Study

Renovating brings energy wins



Garth and Carolyn were keen to know whether the past two years of tirelessly renovating their home to make it more comfortable and energy efficient had truly worked. They got a Victorian Residential Efficiency Scorecard assessment and it gave them a resounding mark of approval.

Carolyn and Garth: Burwood East

“Yeah, that’s about right,” Garth says to the top assessment of 10 stars for his home. “When you look at what we’ve done compared to other people, we’ve done a lot.”

A Scorecard star rating and certificate can help you make decisions about what renovations to make, or they can show potential buyers or renters how energy efficient your home already is.

Carolyn and Garth’s 10-star rating really reflects the impressive list of improvements they’ve made to their 1960s yellow brick veneer home in Burwood. Not long after buying the house in 2014, they realised there was much to do. The house was draughty, which made it expensive to heat in winter and cool in summer. Worsening the situation

Summary

- Switching from old gas appliances to new, efficient electric appliances, then installing rooftop PV, gave Garth and Carolyn huge savings.
- Improving ceiling and wall insulation and adding double-glazed windows made the house cheaper to run and much more comfortable.
- The couple haven’t paid an electricity bill since October 2016.
- The house rated 10 out of 10 Scorecard stars.

was that Carolyn’s hay fever and asthma were exacerbated by the old loose fill insulation in the roof.

After replacing the roof insulation with hypo-allergenic R4.5 polyester batts they took out gas appliances and brought in new, energy-efficient electric ones. The ducted gas heater made way for two electric split systems, the gas stove was ripped out for an induction cooktop and gas hot water service replaced with an electric hot water heat pump.

Garth and Carolyn then installed a large 8-kilowatt solar system on their roof and added a 6-kilowatt battery set up to complement the solar. They retrofitted double glazing to their windows, insulated the ceiling and some external walls during the renovation of the kitchen, laundry and bathroom, installed awnings for shade, sealed gaps and replaced lighting with energy efficient LED lightbulbs. To save water and the energy to heat it, they fixed low-flow showerheads and taps. They also took other sustainability steps: installed two plastic rainwater tanks with a combined 8000 litre-capacity as well as dripline irrigation and a compost system. They planted vegetables and fruit trees and brought in chickens.

“We’d attended Sustainable House Day for a few years and at the front of our minds was that we wanted our house to be sustainable and energy efficient,” Garth says. “I’m a numbers guy, I like analysing things. I analysed our gas and electricity bills and with gas and electricity prices going up, it made sense financially and environmentally to go off gas and put in energy efficient electric appliances.”

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Removing gas appliances would immediately save them about \$1200 annually in bills but increase electricity consumption. However, because of their solar system and batteries they are more than covered. In fact, the couple has not paid an electricity bill since October 2016 and are currently more than \$400 in credit.

Garth says they feel vindicated by the Scorecard assessment and pleased to have an independent rating of their energy efficiency. The Scorecard assessor estimated the original house would have been a very poor 2 stars – a long way from what it is now. The Scorecard assessment also showed a few ways the home could be improved even further: sealing skirting boards gaps, stopping the air leakage out of the old chimney and upgrading the weather stripping of external doors. Some gaps were found in the ceiling insulation caused by trades people during recent works, and the manhole also needed to be covered.

The couple are currently finishing the underfloor insulation and will attend to the suggested improvements by the assessor. In the future they will be looking to add more solar panels on their roof and increasing the number of batteries.

There's no question they have made their home a great deal more comfortable with everything they have done: "When we have family and friends come over, they tell us how much they like the feel of the place," Garth says.

The cost of the renovation has been upwards of \$100,000, which they realise would be beyond the affordability of some. However, not everything has been expensive – sealing gaps and draught proofing, for instance. "We've looked at all we've done as a long-term investment, so we haven't been afraid to spend where it is justified. The upgrades have been more cost effective than knocking down a perfectly sound house and starting from scratch."

Garth and Carolyn opened their house to the public on Sustainable House Day last year to show and explain all their improvements and are planning to open it again this year. They say the response from people has been very positive. "Some people who came made appointments to see us afterwards to talk about things like double glazing in more depth. We've had a lot of good feedback.

"Hopefully we've got a comfortable home for the next 20 years."



Thinking of renovating? Contact an assessor and organise a Scorecard assessment.