

Case 05.

Display House Open to the Public

Contact SECCCA for more information



Table 01.

Key upgrades (beyond the minimum 6star NatHERS) and Costs

The following are the upgrades and outcomes of a 27 square house recently built in Officer. Please refer to the SECCCA Toolkit for further details of the key upgrades and rating systems.

NUMBER	KEY UPGRADES	TYPE OF ACTION	COST EXTRA	POINTS
1	Maximised orientation of living spaces north	Passive	\$0 *modelled on average household use	1
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$0 *modelled on average household use	1
3	Upgrade insulation in roof and walls	Building Fabric	\$3850	1
4	Double Glazing	Building Fabric	\$1500	1
5	Good - Excellent Air Tightness	Building Fabric	\$300	1
6	Efficient Solar Hot Water or Heat Pump (ie. not a Water Tank)	Appliance	N/A	1
7	Fully Electric	Appliance	\$1300	1
8	Efficient electric reverse cycle heating and cooling system	Appliance	\$4000	1
9	Solar PV System	Generate Power	\$5000	1
10	Battery Storage System	Store Power	\$10,000	1
N/A	Less \$500 in savings from no gas line install	N/A	-\$500	
TOTAL POINTS			\$25,450	10
PAYBACK: 6.7 YEARS*				
SAVINGS AFTER PAYBACK BETWEEN 6.7 AND 15 YEARS			\$23,812	

*Notes: additional \$4000 to met minimum 6 star requirement = Total \$19,450. Assumes typical bill saving of \$1602 annual electricity and gas \$1267 annually. Total \$1602 + \$1267 saving = \$2869 annual electricity and gas saving.

Additional upgrades:

- Internal sliding doors for controlled openings - lounge, passage and meals to rear passage \$700
- Fans 3 bedrooms + 2 living area's @ \$250 each

Table 02.

Energy Ratings and Power Bills

RATING / TEST / OUTCOMES	OUTCOME
NatHERS	7.3
Victorian Residential Efficiency Scorecard	10
Blower Door Test	3.65ACH50
Energy Bills	Electricity: \$0 Gas: N/A



Anticon Blanket R1.3 under colorbond roof. As well as assisting insulate the home it stops condensation and dust entering the roof space.



Sanden Heat Pump highly efficient alternative to Solar Hot Water



Reduced window size, good use of fans and complemented with reverse cycle split systems through the home for use when required.

Benefits

as reported by the homeowner:

- Better for the environment
- Small amount of initial outlay the running costs have decreased
- It's a no brainer, people say why wouldn't you have that
- Lot more comfortable living

Barriers

as reported by the homeowner:

- Just time, making sure the products and process could be replicated at minimal cost
- All of its easy to do, right down to draught sealing, caulking and taping
- We thought that lot of this sort of stuff was going to be too expensive. Workshops with SECCCA showed what would give us the most benefit for least cost
- A lot of misconception about what to do to achieve zero emissions

Conclusion

This house achieved 10 out of the 10 key recommendations through the program at a cost of \$24,500. As a result the fully electric house was highly rated under the Residential Efficiency Scorecard and under NatHERS achieved a 7.3 star rating.

The home was air tight above recommendations and as a result may require forced ventilation in the future. As a result of the use of efficient appliances such as lights, hot water heating and heating and cooling coupled with solar and a battery system this house uses zero net electricity and exports power to the grid.

This house was used as a demonstration home for a local builder and demonstrates all the key recommendations at an affordable price. Excluding the battery system this house demonstrates that for an additional \$15,000 an efficient, comfortable, zero energy is possible and affordable.



Good example of R5 roof insulation installed and as indicated in red circle a sealed extraction fan unit for use in bathrooms and toilets.



5kw Solar systems installed with excellent northern orientation