

Case 01.

Occupants:

A couple living with 3 school aged children.



Table 01.

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

The following are the upgrades and outcomes of a 29 square home recently built in Clyde North. 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	\$500 Change to Driveway	1
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$500 Change to Window Plans	1
3	Upgrade insulation in roof and walls	Building Fabric	N/A	0
4	Double Glazing	Building Fabric	\$3000	1
5	Good - Excellent Air Tightness	Building Fabric	N/A	1
6	Efficient Solar Hot Water or Heat Pump	Appliance	N/A	1
7	Fully Electric	Appliance	N/A	0
8	Efficient electric reverse cycle heating and cooling system	Appliance	\$5000 Upstairs Bedrooms Only	1
9	Solar PV System	Generate Power	\$4400 Ex Rebate = \$2200	0
10	Battery Storage System	Store Power	N/A	0
TOTAL POINTS			\$11,200	7
PAYBACK: 7.2 YEARS*				
SAVINGS AFTER PAYBACK BETWEEN 7.3 AND 15 YEARS			\$16,308	

*Notes: additional \$4000 to meet minimum 6 star requirement = Total \$15,200. Assumes typical bill saving of \$1602 annual electricity and gas \$316 - \$200 quarter = \$116 or \$516 annually. Total electricity \$1602 + \$516 gas = \$2118 annual saving

Additional upgrades:

- Flipped house plans and driveway to access northern orientation – cost \$500 for new driveway.
- Ducted gas to living spaces with upgraded zone control with reverse cycle split system upstairs.

Table 02.

Energy Ratings and Power Bills

RATING / TEST / OUTCOMES	OUTCOME
NatHERS	6.1
Victorian Residential Efficiency Scorecard	10 Stars
Blower Door Test	6.7 ACH50 – Good
Energy Bills	Electricity: Net \$0 Gas: \$200 a quarter



R4 in the roof, however some batts were displaced



6.2kw Solar System

Benefits

as reported by the homeowner:

- Reduced power bills
- Double glazing makes the house quieter from outside noise
- Additional light in the living spaces during winter

Barriers

as reported by the homeowner:

- Builder didn't want to make changes however after persistence agreed on some things

Conclusion

This house achieved 7 out of the 10 key recommendations through the program at a cost of \$11,200. As a result the house was highly rated under the Residential Efficiency Scorecard however this did not move the NatHERS rating.

The home was air tight within recommendations.

As a result of the use of efficient appliances such as lights, hot water heating and heating and cooling coupled with solar this house uses zero net electricity. However due to boosting hotwater heating, cooking and downstairs heating with gas the house still attracts a gas bill of \$200 a quarter.



Efficient reverse cycle split system used upstairs



Double glazing used throughout the house



Alfresco retractable doors for shading and wind protection