

CASE STUDIES SUMMARY

The following are a summary of the preliminary outcomes of those that participated in the New Homes Energy Advisory Service. Participation was voluntary and changes were made accordingly. Please note that indicative costs and benefits are self-reported by participants.

For more information or to undertake a consultation please contact Dan Pleiter on 9705 5662.

CASE STUDY NO.1

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

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	NA	0
4	Double Glazing	Building fabric	\$3000	1
5	Good – Excellent Air Tightness	Building fabric	NA	1
6	Efficient Solar Hot Water or Heat Pump	Appliance	NA	1
7	Fully Electric	Appliance	NA	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	1
10	Battery Storage System	Store power	NA	0
TOTAL POINTS			\$11,200	7

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

Table 2. Energy Ratings and Power Bills

Rating / test / outcomes	Outcome
NatHERS	Not Provided

Victorian Residential Efficiency Scorecard	10 Stars
Blower Door Test	6.7 ACH50 – Good
Energy Bills	Electricity: Net \$0 Gas: \$200 a quarter

Benefits as reported by the home owner:

Reduced power bills

Double glazing makes the house quieter from outside noise

Additional light in the living spaces during winter

CASE STUDY NO.2

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

Number	Key Upgrades	Type of Action	Extra Cost	Points
1	Maximised orientation of living spaces north	Passive	NA	0
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$300	1
3	Upgrade insulation in roof and walls	Building fabric	\$2000	1
4	Double Glazing	Building fabric	\$14,000	1
5	Good – Excellent Air Tightness	Building fabric	TBC	1
6	Efficient Solar Hot Water or Heat Pump	Appliance	\$2,000	1
7	Fully Electric	Appliance	\$1500	1
8	Efficient electric reverse cycle heating and cooling system	Appliance	\$2000	1
9	Solar PV System	Generate power	TBC	0
10	Battery Storage System	Store power	NA	0
NA	No gas line installed -\$500	NA	\$-500	
TOTAL POINTS			\$21,300	7

Additional upgrades:

Installed two electric vehicle charge points

Used recycled bricks and recycled plastic composite decking

Table 2. Energy Ratings and Power Bills

Rating / test / outcomes	Outcome
NatHERS	6.8
Victorian Residential Efficiency Scorecard	TBC
Blower Door Test	TBC
Energy Bills	Electricity: \$500 a quarter* Gas: NA

*Note – also used to charge electric car 3-4 times a week

Benefits Summary:

Lower power bills than previous homes

Comfort of the home – requires minimal cooling in summer. Winter comfort TBC this year

Double Glazed windows – result in little outside noise

CASE STUDY NO.3

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

Number	Key Upgrades	Type of Action	Cost Extra	Points
1	Maximised orientation of living spaces north	Passive	NA	0
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	NA	0
3	Upgrade insulation in roof and walls	Building fabric	\$500	1
4	Double Glazing	Building fabric	NA	0
5	Good – Excellent Air Tightness	Building fabric		0
6	Efficient Solar Hot Water or Heat Pump (ie not a Water Tank)	Appliance	NA	1
7	Fully Electric	Appliance	NA	0
8	Efficient electric reverse cycle heating and cooling system	Appliance	\$4000	1
9	Solar PV System	Generate power	NA	0
10	Battery Storage System	Store power	NA	0
TOTAL POINTS			\$4500	3

Additional upgrades:

- Internal shutters

Table 2. Energy Ratings and Power Bills

Rating / test / outcomes	Outcome
NatHERS	TBC
Victorian Residential Efficiency Scorecard	7
Blower Door Test	7.74 ACH50 <Good
Energy Bills	Electricity: \$300 a quarter Gas: \$100 approx a quarter

Benefits:

- Bills are a lot lower than previous houses

CASE STUDY N0.4

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

Number	Key Upgrades	Type of Action	Cost Extra	Points
1	Maximised orientation of living spaces north	Passive	NA	0
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$0	1
3	Upgrade insulation in roof and walls	Building fabric	\$1800	1
4	Double Glazing	Building fabric	\$0	1
5	Good – Excellent Air Tightness	Building fabric	\$0	1
6	Efficient Solar Hot Water or Heat Pump	Appliance	\$0	1
7	Fully Electric	Appliance	NA	0
8	Efficient electric reverse cycle heating and cooling system	Appliance	NA	0
9	Solar PV System	Generate power	\$5000	1
10	Battery Storage System	Store power	NA	0
TOTAL POINTS			\$6800	6

Additional upgrades:

- LED lights \$120 each
- Hebel upgrade \$4,000

Table 2. Energy Ratings and Power Bills

Rating / test / outcomes	Outcome
NatHERS	6
Victorian Residential Efficiency Scorecard	10
Blower Door Test	5.3ACH50
Energy Bills	Electricity: \$0 Gas: \$135 a quarter

Benefits:

- Cooler during summer as well. Only ever used the evaporative cooler on the hot days – generally just a more comfortable home.
- Power bill is in credit and receiving 20c for feed in tariff

CASE STUDY N0.5

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

Number	Key Upgrades	Type of Action	Cost Extra	Points
1	Maximised orientation of living spaces north	Passive	\$0	1
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$0	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	Appliance	NA	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
NA	Less \$500 in savings from no gas line install	NA	-\$500	

TOTAL POINTS			\$25,450	10
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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 2. 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: NA

Benefits:

- 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 to living

CASE STUDY NO.6

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

Number	Key Upgrades	Type of Action	Cost Extra	Points
1	Maximised orientation of living spaces north	Passive	\$0	1
2	An appropriate Shading Strategy (including eaves, awnings, pergolas, reducing window sizes, block out blinds etc)	Passive	\$0	1
3	Upgrade insulation in roof and walls	Building fabric	\$1600	1
4	Double Glazing	Building fabric	\$10,000	1
5	Good – Excellent Air Tightness	Building fabric	\$0	1
6	Efficient Solar Hot Water or Heat Pump	Appliance	\$0	1
7	Fully Electric	Appliance	\$2500	1

8	Efficient electric reverse cycle heating and cooling system	Appliance	\$3400	1
9	Solar PV System	Generate power	Included (around 5k)	1
10	Battery Storage System	Store power	Included (around 10k)	1
	Deleted gas install -\$500	NA	-\$500	
TOTAL POINTS			\$32,000	10

Additional upgrades:

- Dark tiles to absorb heat in the winter
- LED lights throughout – standard \$120 each
- Light colours external
- Had to upgrade for BAL 12.5
- Built with hebel – however some foam in places. Plus sarking = R2 (but didn't put extra batts)
- Screenaway blinds – channel on sides. Just charged for panelling \$5k in total ie. no real extra cost.
- \$800 for the insulated panel garage door
- Pitch on the roof was changed for solar – no charge
- Door in hall to zone top and bottom of the house

Table 2. Energy Ratings and Power Bills

Rating / test / outcomes	Outcome
NatHERS	6.9
Victorian Residential Efficiency Scorecard	9
Blower Door Test	4.1ACH50
Energy Bills	Electricity: \$50 a quarter Gas: NA

Benefits:

- Moved in in June, in winter didn't need to put the heater on. Only a couple times when family were down from interstate
- Love the cooktop – so easy to use, heat is instant and easy to clean. Would never go back.
- Power bills – generating more than using. Bills about about \$100 a quarter – 5 people living in house. Most of that is the service fees. 14kw on average usage daily.
- Was 24 - 28 degrees in winter while 14/18 degrees out
- Just comfortable to live in all the time. Even when it's a bit hot, its not unbearable – not humid
- Don't hear any sounds outside from the double glazing