

eco smart ideas begin at



Eco-Features and Calculations:

Assumptions:

The following assumptions have been made and are based on information from the -

- Australian Greenhouse Office (AGO)
- Sustainable Energy Development Office (SEDO)
- Carbon Neutral (CN)
- Independent Power Systems (IPS)



1. The average medium sized car travelling 14,000km pa produces approximately **3.28 tonnes of CO2 pa**. This is Full Cycle Fuel Emissions (includes CO2 produced in the production of the fuel and its use in the vehicle) versus Tailpipe emissions only.*
 2. CN plants on average **6 trees** per tonne of CO2 produced for offsets (CN)
 3. To produce 1kWh of electricity from the SW Grid produces approximately 0.992kg of CO2.*
 4. 1.05kWh PV system produces 1,679kWh per annum (IPS)
- *Australian Greenhouse Office Factors and Methods Workbook Dec 2005

The following table assumes full uptake of the individual PV systems by purchasers of the units.

Photo-Voltaic Arrays – Individual and Communal

System	Power produced (kWh)	Tonnes of CO2 not produced	\$ savings pa (based on A1 tariff)	Cars off the road	Trees Planted
10.5kWh Communal System	18,186	18.04	\$2,727	5.5	109
35 Units with 1.05kWh system	58,765	58.29 or 1.67 per unit	\$8,750 or \$250 per unit at A1 tariff rate	0.51 per unit or 17.8 for complex	10 per unit or 350 for complex
TOTALS	76,951	76.33	\$11,477	23.30	459

Solar Gas Boosted Hot Water System

Using Apricus evacuated glass tubes, storage tanks and Bosch instantaneous gas booster system.

The hot water system of any home is generally the single largest consumer of power in the house, contributing approximately 30% of energy costs. The use of solar can provide approximately 70% of your hot water needs before the need for boosting is required.

Assumptions:

1. Comparison based on information from SEDO website
2. Based on the consumption of 200L of hot water a day
3. Electric storage unit - with delivery capacity between 100-250L produces approximately **4.25 tonnes per annum GHG** (greenhouse gases)
4. Solar gas boosted with storage tanks produces approximately **0.3 tonnes per annum GHG**
5. 35 residential units, the office and café all using the system

	Tonnes pa GHG produced	Tonnes pa GHG saved	Cost pa (\$)	(\$ Saved pa	Cars off the road	Trees Planted
Electric storage (ind unit)	4.25	N/A	\$630	N/A	N/A	N/A
Electric storage for complex	157.25	N/A	\$23,310	N/A	N/A	N/A
Solar gas boosted (ind unit)	0.30	3.95	\$90	\$540	1.2	23
Solar gas boosted for complex	11.10	146.15	\$3,330	\$19,980	44.40	876

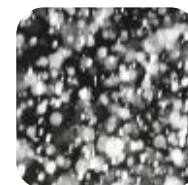
Total Potential Savings when PV arrays and solar gas boosted HWS taken collectively

	Tonnes of GHG not produced pa	\$ Saved pa	Cars off the road	Trees Planted
Individual Unit	5.62	\$790	1.71	33
Entire Complex	222.48	\$31,457	67.70	1,335

Rain Water Harvesting:

The rain water harvesting is estimated to save 530,000 litres of water per annum and will service the -

- Garden areas
- Toilets
- Cold water supply to washing machines



Aside from saving scheme water it will also greatly reduce any discharge in to the stormwater system.