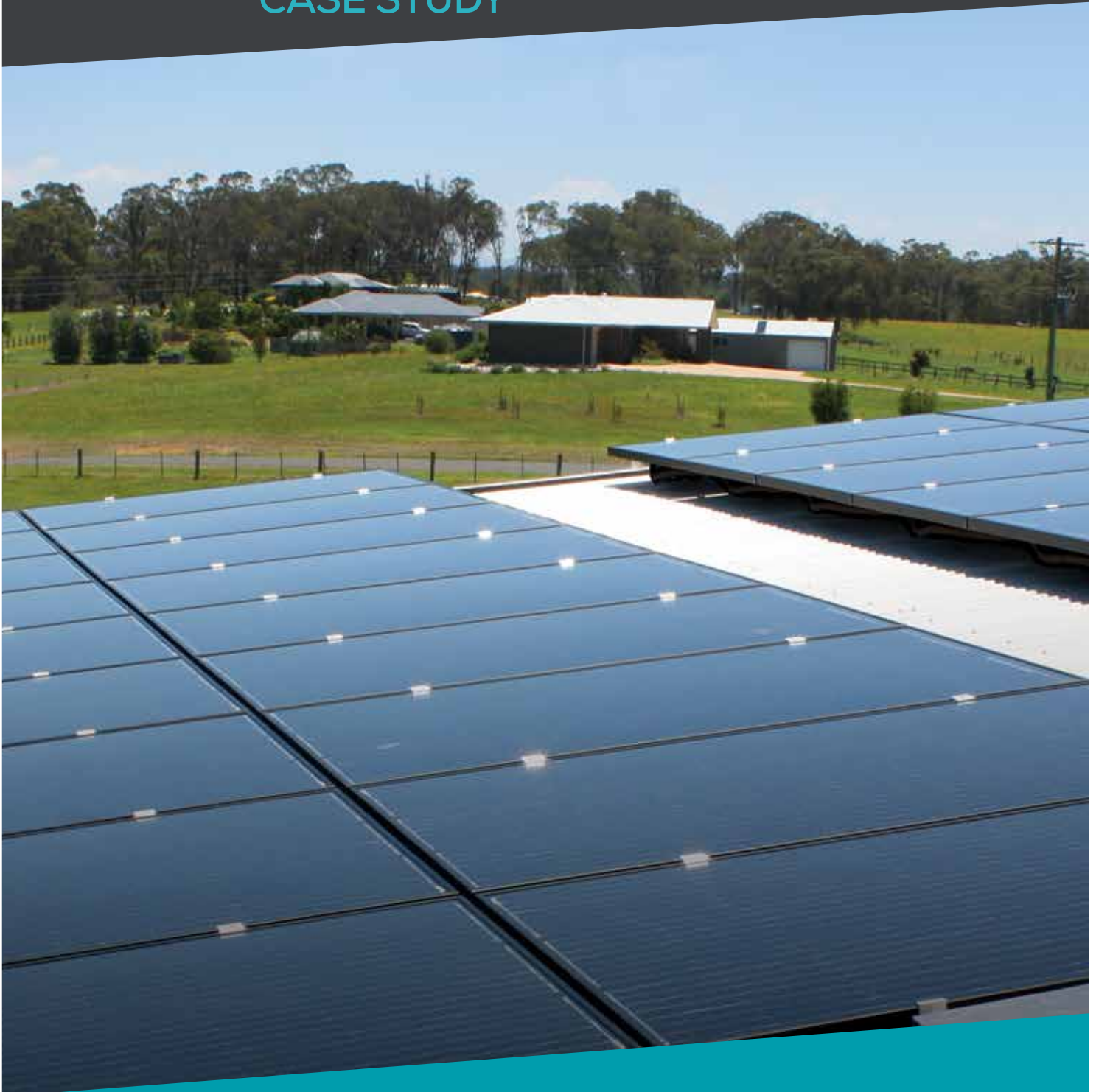




HEATSEEKER
DUALSUN
CASE STUDY



BAIRNSDALE
EAST GIPPSLAND, VICTORIA, AUSTRALIA



Supreme Heating

Our Innovation. Your Lifestyle.



 **1300 787 978**
supremeheating.com.au



BAIRNSDALE

EAST GIPPSLAND, VICTORIA, AUSTRALIA



From an underperforming solar pool heating system and high electricity bills to perfect swimming temperatures and tremendous energy savings.

System Installed	Heatseeker DualSun hybrid PV/T solar system combined with Heatseeker Plus solar pool heating
Solar Collectors	10.08kWp & 28.58kWth DualSun PV/T collector (36 x 280Wp & 794Wth panels) and 40m ² Heatseeker Plus collector
Inverter	SolarEdge SE8K Three Phase Inverter

Supreme Heating was initially consulted to discuss the customer's concerns about the inability to use their swimming pool with their current form of heating.

The swimming pool is heavily shaded from the house and is exposed to high winds. Featuring a negative edge design, the use of a pool cover was not an option. These factors all significantly contribute to heat loss.

The existing evacuated tube solar pool heating system was grossly undersized and had impacted the family's use of the pool for the last three years.

The customer was also considering the installation of a solar PV system to reduce their large electricity bill, with an average household consumption of 95kWh/day.

Assessing both the customer's pool heating requirements and energy concerns, Supreme Heating proposed a two-in-one solution providing adequate heating for the swimming pool and reduced electrical expenses.

Supreme Heating designed a solution consisting

of a 10.08kWp & 28.58kWth DualSun PV/T solar system coupled with a 40m² Heatseeker Plus traditional strip solar system to meet the heating requirements of the pool.

The design of the thermal pool heating system was based on the Pool Heat simulation program that included heat outputs from both systems.

The PV electrical system size was chosen based on the customer's budget.

The Heatseeker DualSun system generates an average of 40kWh/day, covering approximately 42% of the daily household electrical consumption. This equates to a saving of \$3650/year.

The solar thermal outputs create acceptable swimming conditions during the warmer weather period of late November until late March with pool temperatures reaching up to 28-32°C.

The equivalent cost of using an inverter heat pump to create the same energy outputs of the solar system would be \$3330, negating the benefit of the electrical savings provided by a standard PV system.

1 YEAR



14.6 MWh
IN PV ELECTRICAL PRODUCTION



80 MWh
IN HEATED WATER PRODUCTION



\$6,980
SAVED IN COMBINED ENERGY EXPENSES

20 YEARS



292 MWh
IN PV ELECTRICAL PRODUCTION



1,600 MWh
IN HEATED WATER PRODUCTION



\$139,600
SAVED IN COMBINED ENERGY EXPENSES

Savings data based on the alternative use of an inverter heat pump with a COP of 6 and an electricity tariff of 25c/kWh heating the pool from November to March to temperatures of 28-32°C. Savings data does not account for inflation.



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