

home

Frank Dallmeyer at his South
Townsville energy-friendly
home. Picture: EVAN MORGAN

DREAM PAD

Modern life but off the grid

Hidden in a quiet South Townsville street is a zero carbon footprint home that, despite its futuristic, energy-saving features, has been built to blend in with the historical neighbourhood, writes **Roanne Boldery**

N A bid to practise what they preach, the Dallmeyer family has

constructed an energy-efficient residence that won't cost the earth.

In 2012, Frank and his wife Katrina,

owners of Tropical Energy Solutions,

IN A bid to practise what they preach, the Dallmeyer family has constructed an energy-efficient residence that won't cost the earth.

In 2012, Frank and his wife Katarina, owners of Tropical Energy Solutions, made the decision to demonstrate their company's ideas and concepts by building a new residential property called 'The Triple Zero House' on the fringe of the Townsville CBD on a 300sq m block of land, just 10m wide by 30m long, in Perkins St.

"It was zoned for commercial and/or residential activities and our original plan was to establish our offices here but it proved to be too difficult, due to building codes and council requirements," Mr Dallmeyer said.

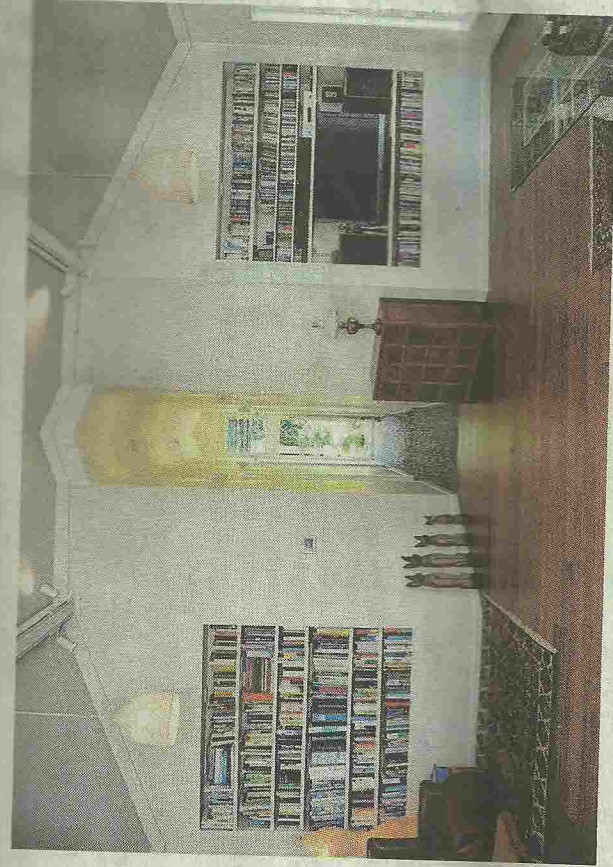
"We decided that a house with an operational carbon footprint of zero was a better option, but we knew it was not difficult to build something energy efficient, comfortable and sustainable if you have unlimited funds, so we wanted to show that it could be done at the same cost as a typical new subdivision property."

Mr Dallmeyer joined forces with fellow eco-minded company Finlay Homes and over 15 months together they designed an average house with some extraordinary energy and cost-saving features built from the ground up.

They started with the layout focusing on efficiency of space by reducing the number of rooms, to make the home feel spacious and comfortable, despite the 100sq m floor space plus 40sq m if you add the deck and carport.

"We decided to keep it to two very large bedrooms at around 12sq m each, one expansive main bathroom, separate toilet and laundry spaces and a practical workspace kitchen and a separate 50sq m living area connected to a hallway "spine" under 4.2m high ceilings, with four sets of french doors lined with louvres above providing beautiful airflow," he said.

The rear of the building faces east so was the ideal location for a shaded deck that looks over a grassy courtyard with a shed, water feature, vegetable patch and fruit trees.



Storage was also a huge factor for a compact house, with two attic-style storage rooms accessible from the two bedrooms and the cathedral ceiling over the carport providing space to hang kayaks. The material used throughout the house is geared towards reduced heat absorption and maximum light reflection.

"We eliminated all brick, concrete or other high thermal mass materials from the build by using lightweight timber walls with a composite reflective cladding, sandwich roof panel and tinted louvres," he said.

"We added bamboo flooring in the living areas, hard-wearing pebble flooring to the wet areas, recycled reflective grey coloured 'Ecodeck' to the patio and salt and pepper aggregate concrete featuring 90 per cent white pebbles and only 10 per cent black outdoor."

There are aerodynamic ceiling fans and LED lights with timers or dimmers throughout, plus efficient appliances including three 2.5kW split system seven-star rating air conditioners, a C-BUS home automation and energy saving system, a trickle irrigation system, a large capacity power outlet in the carport for charging electric vehicles and a Triple Zero Power

System with 26 PV solar panels located on the roof. "It uses no other power source other than the sun and a medium size battery storage system to provide a generous power supply 24/7 and all-year round with zero electricity bills, zero gas bills and zero emissions, taking away any worries of future price rises or grid blackouts," Mr Dallmeyer said.

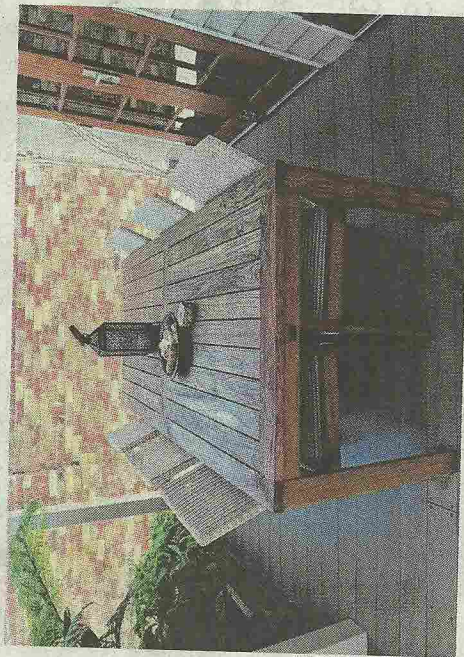
After a year in the Triple Zero House, the Dallmeyers can report that it performed in Townsville's tropical climate.

Despite the long, hot summer season resulting in extensive air conditioning hours, they never had to use more than 40 per cent of the battery capacity on any day and as expected the solar generation capacity was generous, giving yields of 8 to 9 kWh even on days with constant rain.

"The power system never missed a beat and we stopped looking at the meters and just enjoyed the reliable supply of 'free' energy," he said.

"The end hope is to be able to inspire others to think outside the box with how they live in the tropics."

FOR MORE INFORMATION CALL TROPICAL ENERGY SOLUTIONS ON 4772 7394 OR VISIT TROPICALENERGYSOLUTIONS.COM.AU.





Would you like to see your dream pad featured in *Home*? Whether you've designed it yourself or pulled together a team of professionals to do the job, email roanne.boldery@news.com.au.

