

# CASE STUDY: A better way with electric vehicles

Matthew Minter is a family man, farmer and music teacher from Armidale. He first became interested in electric cars as a university student. At that time he was living in Parramatta next to the M4 highway. "I would breathe in the air every morning, fresh with the tang of the morning commute. Thousands of near stationary cars were belching out fumes and I just thought, 'there must be a better way'"

Matthew has pursued that better way with gusto ever since. In 2006, long before electric vehicles were available commercially, Matthew converted his Toyota Hilux to run on an all electric motor. Since then he's also purchased a Nissan Leaf. Matthew's electric vehicles, and the solar system he installed alongside them, have certainly been an investment. However, over the long run Matthew has seen the economic benefits far outweigh the costs. "My electric vehicles are amazingly cheap to run, never needing oil changes or the maintenance that I used to have to pay for all the time. What's best of all is that I never have to buy petrol. Thanks to our solar system with Tesla powerwall batteries, we don't need to buy electricity either."

While most people are curious about his electric vehicles, they often voice concern about their ability to cover long distances. Matthew acknowledges that anyone considering an electric car should first ensure that the vehicle will match their needs. However, if you're someone that rarely drives more than 100-150 kms in a day, the driving range of an electric vehicle shouldn't be an issue. "The driving range of my vehicles is perfectly adequate for my daily commute and all the day to day things I need to do such as drop the kids at sport and school, pick up farm supplies, deliver firewood and do the shopping." Of course, electric vehicles have more than just economic benefits. As they have the capacity to run on renewable energy they are an integral part of the solution to climate change. "As we shift to a renewable energy economy, the environmental value of electric cars will truly begin to be realised."

Matthew's advice to anyone considering an electric vehicle is simply to do your research and go for it. It is the better way.



# festival of solar

The future of solar technology - it's more than just panels

Coffs Harbour Showgrounds June 1

# CASE STUDY: Using solar to power homes and transport

In Coffs Harbour the sun is in no short supply - so Roger Sharpe figured he might as well harness it to power his house. After looking into it, the solar company pointed out that the roof had the capacity to power his entire block of five units. "All tenants were happy to go along. Now I only have one service fee instead of five, which saves me \$2000 per year."

Roger's solar system is comprised of a set of two 5KW panels, and any energy he doesn't use feeds straight back into the grid. He intends to install a battery when they become more affordable.

In recent years, Roger has also invested in a Beyond Oil electric bicycle. When fully charged, his bicycle can cover a distance of 70kms. On average the bike goes at a speed of 25kms per hour, making it ideal for elderly riders or for people who ride for leisure.

"I use the e-bike to help me cycle up hills and into the wind. It's just a bonus that it is now free to charge. I love it, and ride almost every day."





## CASE STUDY: Saving with solar + batteries

Kevin Evans and his family moved to the Bellingen Shire in 2016. While renovating their home they installed a hybrid solar system through Bellingen Solar Depot. The system is made up of twenty four 6.8KW of solar panels. On top of that, they also installed a 8KW battery system.

There were a number of reasons that they wanted to install solar. While Kevin could see that it was a smart decision economically, he also wanted to be part of a transition to renewable energy. We strongly believe in sustainable energy. With our government's lack of a cohesive plan for transitioning our country to renewable energy future, it is individuals that must take the lead. Eventually governments will catch up."

One of the unexpected benefits of installing solar is how aware it's made them of energy consumption and energy usage patterns. We have made further changes to reduce energy costs by installing more insulation, swapping all lights to LED and being smarter about the time at which we use high energy demand appliances." Their power bill has halved since installing the hybrid system and Kevin is confident that with further refinements they'll be able to reduce this even further in the future.



Kevin's advice is to households that are considering solar is to use a local company, it's in their interests to take care of their local customers. Word of mouth spreads fast if they don't." While Kevin did originally receive quotes from companies further afield, it was only the local company that were able to identify the unique challenges they faced on their property.

## CASE STUDY: Retirement savings with solar

Les King and his partner bought their Coffs Harbour home two years ago. "I was keen to install solar. I'm retired and wanted to lower our energy bills to make life a bit easier in the future." At that time the house already had an effective solar hot water system. On top of that Les installed a 5.4 KW solar system comprised of eighteen 300watt PV panels.

With two adults living in the home, Les would say their electricity usage is fairly standard. We had at least one of our air conditioners running most of the summer. We don't use the clothes dryer very often but we do all our cooking with electricity." That summer, they got a \$15.51 credit on their electricity bill. Admittedly it was quite a sunny summer, but we are very pleased with our investment so far."



Les's advice to those wanting to install solar is to be wary of ultra-cheap installations. Consider local companies. You want them to last 25 years."

Les is glad that their household is producing a lower carbon footprint. Having solar has also allowed them to use the air conditioner for longer periods without the worry of a big electricity bill.

## CASE STUDY: Living off grid

Nicole Moore has been living off the grid on solar for almost twenty years. It was the time she spent travelling in developing countries that convinced her that this seemingly radical decision was perhaps, not so radical after all. "There are so many people around the world living without all these modern conveniences - why not me?"

Living off the grid was a decision she made to reduce her environmental impact and she loves that she's able to generate all the energy she, and her family need on her own property. After many years of speaking to people about off-grid living, Nicole has found that while most people are impressed or curious, they usually assume that it's much harder than it is.

While she acknowledges that everyone has different energy needs, Nicole hasn't found living off the grid to be a sacrifice whatsoever. "We really don't go without anything we need."