THE BENEFITS OF *going solar*

Rain, hail or shine, more and more families are turning to solar energy to cut their power bills, and even *make* money. **Graham Readfearn** reports

In the Lane family kitchen, the tiny digital clock on the microwave isn't blinking but underneath the house four LED lights shine brightly. "We're maybe a bit more pedantic now about turning lights off," says 33-year-old mum-of-two Leah Lane. "We make sure the stereo, the TV and the video are off and, yes, the clock on the microwave doesn't go any more."

The four lights downstairs explain the Lane family's diligent approach to how they use power or, more accurately, how they don't use it. Those lights on an uninspiring grey box show the family's six rooftop solar panels are quietly generating clean electricity.

The Lane family has been living with their small 1kW solar photovoltaic (PV) system for more than two years and the effect has been profound because they must surely be one of the most energy-conscious homes in the city.

"It's a more sustainable way of consuming energy," says Leah, who lives with husband Joe, 38, and sons Archie, two, and baby Sam. "[Just] us having six solar panels on the roof won't make a huge difference in the scheme of things, but if lots of people do it then it will."

The family, like 40,000 other South East Queensland householders, are part of the Queensland Government's Solar Bonus Scheme – a type of payment system known as a feed-in-tariff. The Government's tariff system, together with a Federal Government credit scheme to pay some of the up-front costs of solar panels, has prompted a massive surge in rooftop solar installations in the state.

When the feed-in-tariff was introduced in July 2008, there was just 1.5 megawatts (1MW = 1000kW) of solar PV installed in the state in a few hundred homes. Now, there is 91MW. Under the scheme, householders get paid for the energy the solar panels generate, but only above what's being consumed in the house at any given time. Householders get at least 44 cents for every kW/h they send back to the grid, compared with the cost of standard electricity which is just over 21 cents.

"Since we've had the feed-in-tariff, we've not paid anything," says Leah, before pulling out her electricity bill to show a $45 credit. "My husband looks forward to getting the bill to see how we've got on."

To turn their bills into credits, the Lanes have to keep their electricity consumption away from day time and wait until the evening to turn on things like the dishwasher and washing machine. When white goods need replacing, the Lane family looks for the most energy efficient options. They've also switched their cooker to gas. They don't have air-conditioning but they do have a solar hot water heater.

"While our system is only small, by putting in solar hot water and replacing older white goods with more efficient ones we have been able to get the most out of it," adds Leah.

Another family living with a small 1kW system is the Carters, of Wellington Point. Fleur Carter, also a mother of two and a sustainability advisor for small businesses and homes, says that by cutting their energy use the solar panels supply roughly half the family's power. "We totally eliminated stand-by power and had solar hot water fitted. We changed our lights and got a gas stove top. Most people will save about $360 a year on a 1kW system," she says.

Rob Farago is co-founder of the not-for-profit organisation Local Power which has installed solar panels in more than 500 homes since mid-2008, including at the Lane and Carter homes.

He says all households will tend to use less power after having solar installed but anyone who manages to get their bill down to zero on a small 1KW system is "doing incredibly well".

"The behaviour it encourages is to move electricity consumption away from daylight hours. But there's a downside to that because that is the time when the electricity network is stressed the most. Ironically, the solar bonus scheme moves people's use of appliances into that night-time peak."

A spokesman for Energex said that, generally, about a quarter of energy from solar is being sent to the grid and 75 per cent is being consumed inside the home.

The Queensland Electrical Safety Office warns that solar panels pose a risk in flooded areas. Solar panels generate and supply electricity even when the mains power is turned off. So, even if street power has been disconnected there may still be live cables within a building which, due to flood damage, may present a risk. For safety information or enquiries call 1300 650 662, or see www.electricity.qld.gov.au.

For more information on the solar bonus scheme see www.cleanenergy.qld.gov.au.