

### Powering the bush: Problems and solutions in rural Western Australia

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Updated about 6 hours ago

First posted about 11 hours ago



[Mary Nenke with the batteries which store the solar energy that powers her cottages.](#) (ABC Rural: Kit Mochan)

**Rising power costs and reliability issues are driving farms and rural businesses to find alternative energy solutions.**

The National Farmers Federation has found the cost of energy for some farmers has increased by 100 per cent in less than 10 years.

In response, the lobby group has stepped up its campaign for a [bipartisan approach to energy policy](#).

Farmers face huge pressures due to rising costs, but they must also deal with reliability issues and frequent power outages.

That has led many farmers to take power problems into their own hands, and look to alternative and renewable options that reduce the financial burden and improve self sufficiency.

## **Frustration at unreliable connections**

Jenna McGregor describes power reliability as "awful" on the property where she and her husband Scott farm at Tenindewa, about 470 kilometres north of Perth.

"We had a shocking summer. Our power went out copious amounts of times," she said.

"We lose our water because our pumps no longer function, we lose phone signal because our phone boosters no longer work.

"For people that don't have generators it can be very uncomfortable to live through."

Ms McGregor said without power, the heat was uncomfortable but also cost money.

"We are receiving a sub-standard service. We are paying a lot of money for power," she said

"We are paying the same amount that people in towns and cities are paying and we're not receiving the same service."



[Mullewa farmer Jenna McGregor says power goes out regularly in summer in her region.](#)

(ABC Rural: Sarah Taillier)

## **Batteries facilitate off-grid farming**

Former Rural Woman of the Year winner Mary Nenke has been running her family's eco-cottages off the grid for more than a decade and is looking to move their yabby business partly to solar as well.

The family, which has been on the Kukerin property in the heart of the Wheatbelt since 1912, diversified their sheep and grain business during the recession of the 1990s.

Ms Nenke said they diversified with yabbies but sees tourism "as [their] huge future".

The family estimates they spend \$2,000 to \$3,000 on power for their aquaculture business

## **[Regional owners driving solar boom](#)**

each month and they are looking to use solar to offset some of those costs.

The tourist cottages are completely powered by solar, which is stored in lead batteries in a shipping container next to the panels.

During winter, when the days are shorter, they have a backup diesel generator to draw power from.

Ms Nenke said the initial investment for going off the grid was high, but in the long term it was worthwhile.

She said to get the cottages off the grid cost about \$250,000 and they had received a \$30,000 State Government rebate.

Ms Nenke said considering the \$70,000 charge from Western Power to connect their system, getting off the grid was "very attractive".



**When you think of solar you probably think of large-scale solar farms. But Australia's real solar engine is much more humble.**

## **Solar panels power lettuce business**



[Solar panels line the roof of the Dobra family's packing shed at their loose leaf lettuce farm.](#) (Supplied: Loose Leaf Lettuce Company.)

The Dobra family used to spend \$14,000 a month on electricity during the peak summer months on their loose leaf lettuce farm near Gingin, about 80 kilometres north of Perth.

The family grows, packages and transports mixed loose leaf lettuce varieties.

Pete Dobra worked in IT before he and his wife returned to the family farm to work in business development.

He said the family had a growing business and began working with an independent energy consultant to cut down costs.

Solar panels now covered about half the energy costs of the entire business.

The peak summer energy bill had been \$14,000 a month, which was cut to \$7,000 immediately after the panels were installed.

Mr Dobra said even taking the \$2,500 a month repayments on the solar panels, the family was now saving thousands of dollars a month.

"We were cash flow positive the first month," he said.



[Peter Dobra checks the reading on a quick-dry machine, a significant drain on energy.](#)

(ABC Rural: Bridget Fitzgerald)

## Ord farmers frustrated by rising hydro cost

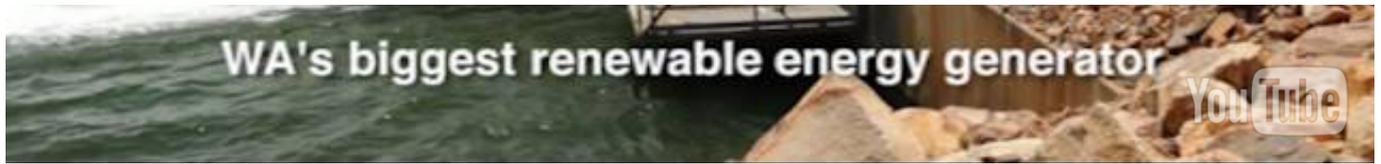
In the East Kimberley region of WA, the towns of Wyndham, Kununurra and the Argyle Diamond mine get their energy from the hydro power station at Lake Argyle.

The power station was built in 1996 and is the state's largest renewable energy generator.

However, the rising cost of its power to local residents has forced some farmers in the Ord Irrigation Scheme to look at alternatives, including solar, and even going back to diesel generators.

The Dobson family has been farming in the region since 1994, and in the early days used diesel motors to run pumps on the river, before switching to electricity.





YOUTUBE: [Hydro Power Station in the Kimberley](#)

Stewart Dobson, who grows bananas, red grapefruit, papaya and mangoes, said the price of power had started to escalate in 2010.

He said when his family started farming the cost of electricity was about 18 cents per kilowatt hour, and it had risen to 33 cents per kilowatt hour.

"Last year's power bill for our farm was \$182,629 for pumping water," he said.

"And with talk of increasing the power price by 15 per cent over the next two years ... it would add an extra \$28,000 or so to our power bill, so we're looking at other options.

The Ord Irrigation Cooperative has also signalled its intent to revert back to diesel generators to pump water into some parts of the irrigation scheme.

Mr Dobson said his understanding was Horizon Power was buying the electricity from the Ord hydro power station and then on-selling it to Kimberley customers at a much greater cost, "which we think is pretty disappointing".

Horizon Power has been contacted for comment.

## Falling renewables cost



We always hear that renewable energy is getting cheaper, but what does that really mean?

## **Solar trial on great southern farm**

Ros and Bernie Giles farm at Dunn Rock, north of Ravensthorpe, in the state's great southern region.

As new land farmers they had power connected in the late 1980s, but being at the end of a spur line meant they were plagued with outages.

So when the mixed enterprise primary producers were approached by Western Power to be part of a trial that would see 72 solar panel erected on their property they eagerly put up their hands.

Almost 12 months on from the start of the trial, the couple said they are still not sure if they will switch off from the grid for good but are pleased with the results they have seen so far.

"It's very clean, the fluctuations have dropped away," Mrs Giles said.

"We've had it quoted to us from the gurus at Western Power that there's been 40 hours of outages that we

haven't experienced because we've had our own system."

Mr Giles said he felt a lot more secure that power will always be there at his farm workshop when he needs it to carry out tasks.

"We just feel a lot more secure that the power is going to be there when we want it," he said.

"If we do decide to go this way, and the lines do get pulled out, the commitment for Western Power to supply the power is still there.

"It's not like we aren't going to get power or anything like that."

The trial on six properties in the region will run for another two years before farmers must decide if they will continue to use solar or return to the main power grid.

## Energy evolution through the decades

During his lifetime on a farm near Yuna in the northern Wheatbelt, Ken Jupp has witnessed a revolution of power supply in regional Western Australia.

The almost 89-year-old has early childhood memories of the 1930s when Wizard lights in the family home were powered by petrol.

Mr Jupp said as soon as animals were killed their meat had to be eaten, as there was no way keep food for extended periods of time.

"We kept food in what we called the Coolgardie Cooler, which operated with a tray full of water on top and with rags hanging down the side onto hessian walls," he said.



[Ros and Bernie Giles are part of Western Power's trial of 72 solar panels forming a standalone system.](#) (ABC Rural: Tara De Landgraft)



[West Australian farmer Ken Jupp has seen light in his home move from petrol powered lamps to mains power.](#) (ABC Rural: Sarah Taillier)

In 1942 the family purchased a fridge that was powered by kerosene and housed in the dining room.

Mr Jupp said great care had to be taken to "keep the flame at a certain level" or else the fridge would start smoking.

Then years of lantern light ended in 1950 when the Jupps purchased a 32-volt battery power system, which charged batteries by a generator.

At 21 years of age, Mr Jupp flicked a switch to create light for the first time.

"That felt as though life was worth living."

In 1971 the family home was connected to the grid power it is connected to today.

Mr Jupp said everything then became "more or less like town living".

#### **Topics**

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