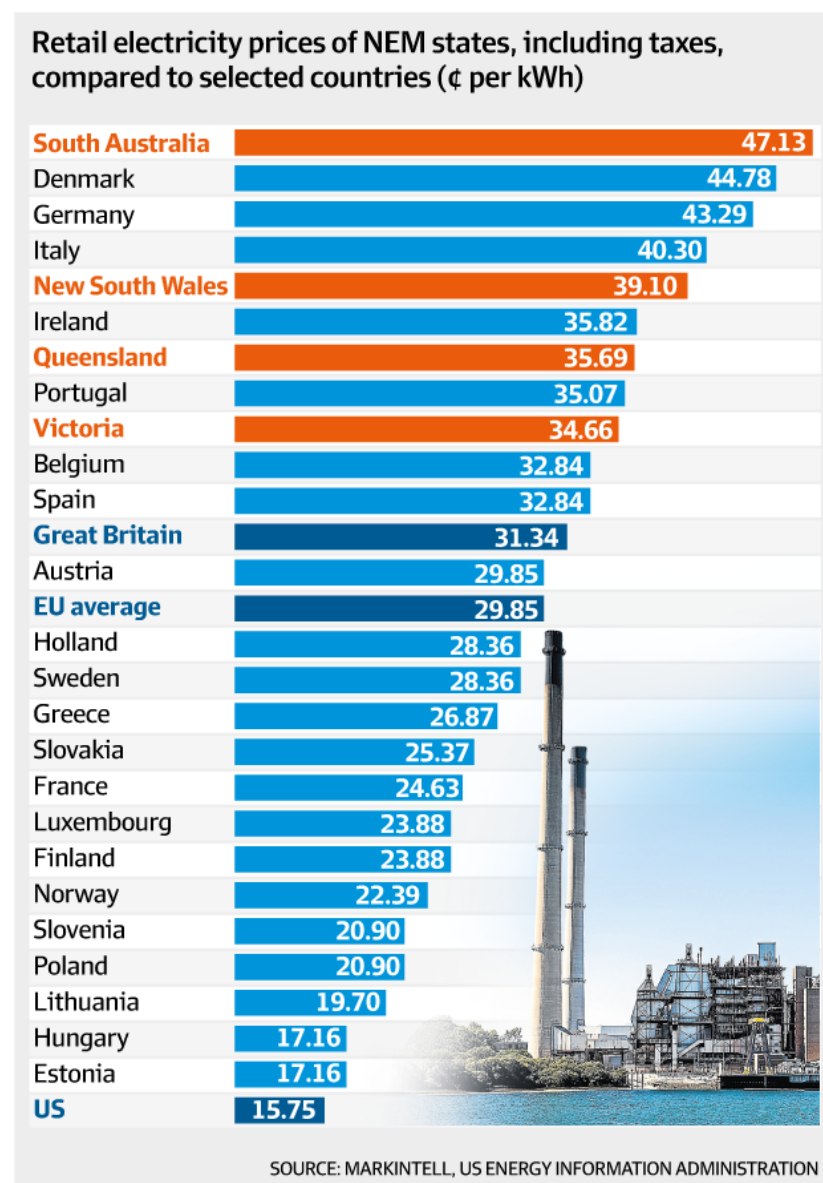


Microgrids in Australia

Last week we discussed microgrids – an interesting convergence of advances in solar, energy storage and smart control technology. While they may seem futuristic, [they have started to be deployed across Australia](#) with many more expected. What factors make Australia such a good match for this new technology?

Sky-high electricity costs

Australians pay the [highest residential electricity rates in the world](#). While a few European countries are close – Italy, Denmark and Germany especially – when energy taxes are excluded, it's just the Australian states in the top spots.



Source: MarkIntell / US Energy Information Administration

With so much financial incentive, it's no surprise Australians are looking for any way to increase control of their bills. The meteoric rise of residential solar and now, home energy storage, shows households are willing to make an upfront investment to know they can reduce their costs.

The solar-plus-storage combination has been especially effective at keeping households from relying on eye-poppingly expensive peak power. Microgrids expand these benefits by allowing a building, group of buildings or even small towns to pool together their electricity generation. Even better – the long-lasting components involved mean that electricity costs will decrease over the lifetime of the system.

Making power go the distance

As Australians know (and tourists are often surprised by) – Australia is BIG. With hundreds of kilometres separating cities and their surrounding towns, getting power from A to B is far from a simple endeavour.

The enormous distances involved are the source of Australia's high power prices. While at the generator level they are on par with other developed countries, transmission and distribution – the hundreds of miles of power lines and millions of towers – [push the rates up](#).

Microgrids allow power to be generated and consumed locally. When the distances involved are measured in metres and not miles, costs come crashing down. And when [92.7% of blackouts](#) are caused by faults in local poles and wires, local generation is more reliable.

Unpredictable weather and powerful sunshine

One factor that can't be ignored when considering these changes – Australia's extreme weather, for better and for worse. The bountiful hours of direct sunshine improve the financial case for residential solar, while causing surging demand for air conditioning which stresses the grid to breaking point.

And it's not just the sun – extreme weather events and storms are also driving the uptake of microgrids. Households have already started turning to solar battery storage to keep the power on when disaster strikes. With microgrids, entire communities can be made safer and more resilient for these situations.

Microgrids in Australia are still in their infancy – German battery manufacturer Sonnen expects to have the first one in operation [by the end of 2018](#). The convergence of local conditions, however, make Australia a prime location for future deployments.