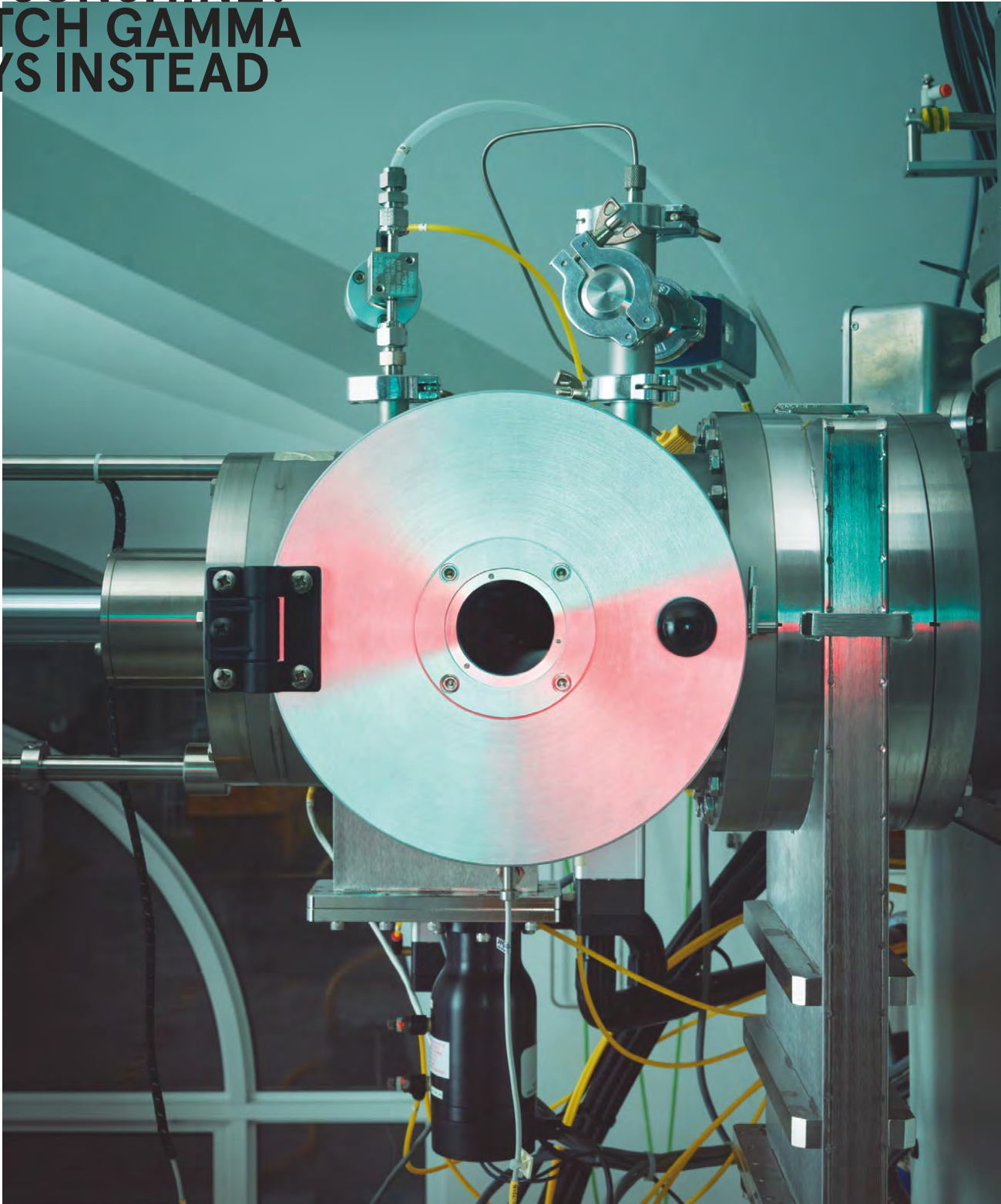


We need more clean, cheap power sources. But if the wind doesn't blow and you're coming up short on daylight, what are your electricity options? A UK startup thinks radioisotope cells are about to have their place in the Sun

## NO SUNSHINE? CATCH GAMMA RAYS INSTEAD





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Here, kinetic cells are being tested with a voltmeter, after which they're stacked in a box lined with lead and coated with aluminium to ensure the radiation is contained. The cobalt-60 radioisotope is placed in the box as the power source. According to the company, the cobalt-60 will decay into a stable material.

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In the magnetron, several semiconductor materials with different electrical charges are deposited on the surface of each disc-shaped kinetic cell. The coloured rings are the result of light reflecting off the materials, which are able to withstand the high energy intensity of gamma rays for long periods of time.

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**Solar cells are a cornerstone of clean energy** – but they could soon be outshone. Cumbria-based Infinite Power says it has harnessed radioisotopes to develop an energy cell that it claims is cheaper and more efficient – and even works at night.

“Our cell doesn’t require the Sun to shine – it’s constantly on,” says Robert McLeod, the chief executive of Infinite Power. Instead of daylight, the cells harness gamma rays produced by a radioisotope called cobalt-60 to generate electricity. Infinite Power claims it’s 600 per cent more effective than an equivalent solar cell, generating zero-carbon electricity at a cost as low as two cents per kilowatt hour. This could make it one of the cheapest forms of energy on the planet.

Some clean energy experts are sceptical about the technology, not to mention the potential safety and regulatory hurdles. Still, Infinite Power has lofty ambitions: to supply energy to vehicles, industrial estates and, eventually, entire communities. It already has plans for a network of EV charging stations across the UK within the next year, and is in talks to provide power to the Møns Klint Feriepark, an upcoming eco-holiday park in Denmark. Here’s how the cells work. **Delle Chan** *infinitepower.life*



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Infinite Power’s kinetic cells are manufactured in a magnetron like this one. The cells work in a similar way to a conventional solar cell, stimulating the interface between two semiconductor materials of opposing charges to produce an electrical current. However, instead of sunlight, the cell harnesses gamma rays.