

## Uranium: the unloved metal whose price is poised to go radioactive



Uranium provides power when its atoms are split, and big players have stockpiles, but experts believe prices will rise again

By [Jon Yeomans](#)

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Last month, shovels hit the ground in a dry corner of western Spain, near the ancient city of Salamanca. Berkeley Energia, a mining company listed in Australia and on London's junior AIM market, started work on a \$100m (£80m) uranium mine.

The project hopes to create nearly 500 jobs in a depressed former mining region and tap into future demand for the heavy metal, which powers nuclear reactors.

To fund its plans, Berkeley recently raised \$30m from a placing of new shares, winning support from funds run by the likes of Blackrock and JP Morgan. When it opens in 2018, the mine will be one of the lowest-cost uranium producers in the world – and the only such mine in Europe, turning out 4.5m pounds a year.

But with uranium prices languishing at 13-year lows, the timing would seem curious. Why would anyone bet on a metal that has fallen so far out of favour? Is uranium due to become a hot property once again?

Paul Atherley, Berkeley's chief executive, says his project is "a rare combination of low operating cost and low capital cost".

It has been in development for more than a decade, but the breakthrough came in 2014 with the discovery of high-grade uranium near the surface. The shallow nature of the pit will help Berkeley keep its costs at around \$15 a pound. By contrast the spot price has almost halved this year to around \$18 a pound, a level not seen since 2003.

Somewhat paradoxically, Atherley is happy for the price to go even lower, because he has his eye on long-term contracts, which command a premium on the spot price.

“You have large reactors in the US and Europe coming off supply in 2018 – they will come back into the market,” he says.

“China is building 60 reactors. They’re coming into the market at the same time. We’re creating the biggest deficit the uranium market has ever seen.”



An aerial view of a uranium mine in southern Australia owned by BHP Billiton CREDIT:REUTERS

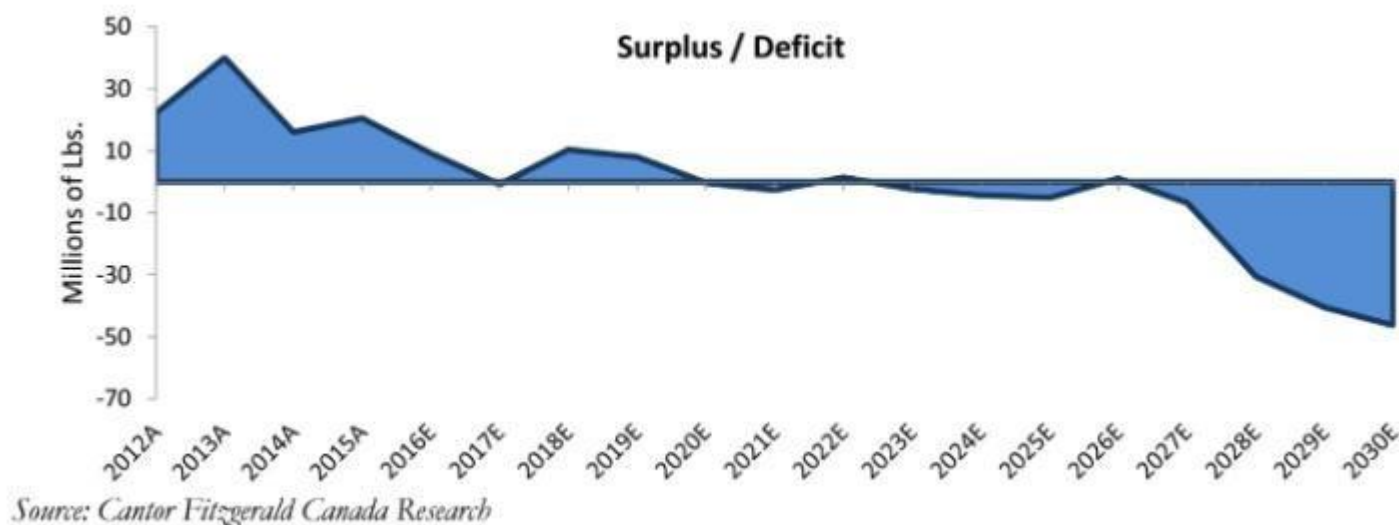
Canada’s Cameco, the world’s largest listed uranium producer, believes that 500m pounds of uranium that will be needed for reactors in the next 10 years have not yet been purchased.

“We know that this demand at some point has to come to the market,” said boss Tim Gitzel earlier this month. He complained that both contract and spot prices “have fallen to levels that are neither rational nor sustainable”.

The belief is that utilities are becoming “uncovered”; with spot prices so low, they have resisted locking themselves into long-term contracts. This could leave them scrabbling for supply at the end of the decade, giving producers the upper hand on prices.

It’s a view shared by analysts at Cantor Fitzgerald, who predicted this year that a “violent increase” in uranium prices was on the way.

Cantor predicts that up to 80pc of the uranium market could be uncovered by 2025. Moreover, it believes demand will outstrip supply, saying: “The low-price environment has choked off exploration activity for uranium and we are at the point where there are not enough uranium projects in the pipeline that can adequately meet the coming demand.”



Peter Reeve, executive chairman of Aura Energy, describes the spot price as an “irrelevance”.

“I don’t believe the supply side is what’s hitting the spot price. It’s more just speculators playing that part of the market,” he says.

Aura, which like Berkeley is listed in Australia, joined Aim in September, with a view to progressing uranium projects in Mauritania and Sweden.

Reeve also believes a “demand avalanche” is coming. Uranium is a relatively common metal, found in rocks and even seawater. Locating it in the right concentrations can be difficult, however.

As Reeve says: “It’s not found near London or Paris. It’s all in very curious locations. That doesn’t make it easy to get at or develop.”

Australia has the biggest known resource of uranium, followed by Kazakhstan, Russia, Canada and Niger. Kazakhstan is by far the largest supplier to Europe, providing 27pc of the continent’s needs.

The country’s production has soared since 2007, accounting for a large part of the oversupply that has depressed prices.

However, the biggest impact on the market has been Fukushima. The devastating accident at the plant in Japan in 2011 knocked confidence in the entire nuclear industry. Japan has since concluded that nuclear power must be part of its energy mix, but bringing its fleet back online has taken longer than expected.

“Low prices now are a combination of too much supply and the impact of Fukushima,” says Edward Sterck, an analyst at BMO. “We do need new mines but [at these prices] people are more likely to shut mines than open new ones.”

While Fukushima paused nuclear demand in many parts of the world, China kept buying uranium, supporting the spot price as it looked to feed its growing fleet of reactors. But this practice has now cooled off, contributing to the sharp fall in price this year.

Greater use of enrichment has also suppressed demand for mined uranium. Enrichment is the process by which the metal is primed for use; utilities can string out the uranium they already have by enriching it.

In itself, uranium emits relatively low levels of radiation thanks to its very long half-life (a slow rate of decay). The power from the metal comes from fission, when the atom is split in a reactor. Uranium is, however, a controlled material, meaning that mines have to clear extra hurdles before they can be built.



Pictures of the Fukushima plant following the tsunami in 2011

And some resources are not being actively developed. Rio Tinto's Ranger mine in Australia is not currently mining, instead processing stockpiles until 2020.

"The uranium market continues to suffer from high inventory levels throughout the supply chain, with soft prices declining during 2016 and remaining under pressure," the company says.

BHP Billiton produces uranium at its giant Olympic Dam copper mine, and could ramp up production.

By producing uranium in Spain, Atherley believes his project answers geopolitical challenges, not least ethical ones. "We care about Fairtrade cocoa and Fairtrade coffee. Someone should ask EDF about Fairtrade uranium. Niger wouldn't pass any human-rights standards," he says.

EDF, which operates all eight of the UK's nuclear reactors and is due to build the long-awaited Hinkley Point C, insists its supply arrangements are above board.

"We source our uranium from a wide range of producers and when doing so, we take into account the identity of the producer to assure ourselves of security of supply and of globally recognised ethical standards," says a spokesman.

The EU's nuclear body, the Euratom Supply Agency (ESA), has identified energy security as a key concern – unsurprising, given that a large chunk of the continent's supply comes from the Russian sphere of influence.

“ESA continues to monitor the market in order to ensure that EU utilities have diverse supply sources and do not become over-dependent on any single external source,” it says.

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Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply alongside gas and renewables. Nuclear provides a “baseload” that solar and wind energy cannot because they vary with the weather – at least until battery storage technology improves.

Proponents argue that no country can successfully “decarbonise”, or curb greenhouse gas emissions, without nuclear. So demand for uranium across the next two decades seems assured.

“Each year the world adds 80m people – that's the equivalent of another Germany,” says Reeve. “Standing still is not good enough.”