

Uranium, weird fuel that's here to stay

The world's oddest commodity has a 4.5-billion-year half-life and is an unlikely new investor favourite, **Bill Hedley** reports

Even in the technically complex world of mineral commodities, uranium stands alone. It is mined and refined like a metal, but is used as a fuel. It has just one significant global market – nuclear power stations – that has huge demand inertia and is totally dependent on state policies, international treaties and other external factors.

It is a highly cyclical market, but with long cycle times. And, for practically the whole of the 1980s and 1990s, the spot price was below the production cost for most of the industry, languishing around \$10/lb. The Euratom long-term contract price declined from about \$30/lb to \$15 over the same period.

Decoding the uranium market demands an awareness of its singular factors. During those long decades, the power plant market was recoiling from earlier optimism as the old reactor technologies proved problematic – two out of three reactor projects agreed at the start of the 1970s were ultimately cancelled.

The market was also depressed by oversupply, both from mines set up in more optimistic times and from repurposed military uranium no longer required after the Cold War. When that ran out, and one of the major world mines flooded suddenly in 2006, the spot price briefly hit \$135/lb. But it has been downhill since then, with spot prices losing about 66pc over the past 14 months. It is now around \$18/lb.

The spot price itself is not a perfect guide because nearly all the reactors in the EU and US are covered by long-term forward contracts of three to 15 years. For 2017, this coverage was about 90pc of the latter and nearly 100pc of the former. Worldwide, the figure is 76pc. With contract prices linked to spot prices and the global oversupply that has systematically depressed the market, that valuation

is set to continue to at least 2020. Even the steady increase in nuclear energy production worldwide, from 300GW in 2000 to 383GW in 2015, is not much help: reactors are being used more efficiently and thus need less uranium per kilowatt.

One to avoid, then? Not quite. As Paul Atherley, chief executive of Berkeley Energia, cheerfully says, uranium is “one of the worst commodities in the world right now, and it's not getting any better in the short to medium term”. For a man who is opening Europe's only major uranium production facility – the Salamanca mine in northwestern Spain, in 2018, and the only one currently under construction in the world – that admission and good humour seem odd.

But Mr Atherley points to major changes coming up in the longer term. “Oversupply will change to deficit by around 2020, as many more reactors come online, and at the same time contract coverage will fall.” By



There will be long-term market growth in this idiosyncratic metal

2023, the US will be down to 15pc coverage and the EU to 25pc. “The biggest recontractualisation ever will be going on. And the Chinese are building 60 new reactors to produce 10pc of their energy supply.”

The International Atomic Energy Agency said this year that on top of the reactors under construction, it had received plans for another 90, although many of these will be to replace older ones.

The lack of recent investment in new mining and production facilities and the retirement of old operations as the inevitable consequences of the long-term doldrums in uranium will keep supplies depressed, says Mr Atherley, and will turn 2016's estimated oversupply of 10Mlb to a shortfall of about 30Mlb by 2030.

Interestingly, any revival in the fortunes of uranium is not dependent on a major increase in nuclear power's share of world electricity



Top of the heap The Salamanca mine will be Europe's leading uranium facility

production – something that is not yet guaranteed. Decarbonisation is driving the retirement of many coal plants but renewables are getting the lion's share of the replacements.

Dr Fatih Birol, executive director of the International Energy Agency, told the World Nuclear Exhibition in a keynote address last June: “Today nuclear reactors generate one-third of low-carbon power globally. However, a lack of investment means that a nuclear renaissance is failing to materialise. The share of nuclear power in the electricity mix is today 11pc and this will rise to 12pc under current policies. However, it must reach 18pc by 2040 to meet COP21 [Paris agreement] climate targets.”

That may yet happen; renewables are still not capable of on-demand capacity boosts or guaranteed baseline power supply, unlike nuclear power. But the biggest long-term trend is in increased demand overall, as global living standards improve and electric vehicles accelerate their inroads into the internal combustion engine's market. Indeed, the World Energy Council predicts that annual global consumption will effectively double by 2040 to 40,000 TWh.

The market may be moving already. In the past couple of weeks there has been a 40pc jump in industry leader Cameco's share price after a multi-year decline.

Even if the role of nuclear power in the energy supply mix does not substantially change there will be long-term market growth in this idiosyncratic metal. To hold it, you need to know what you're doing – but as uranium-238 has a half-life of four and a half billion years, it is not going away.



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