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Enrichment potential

Just because nuclear power leaves no carbon footprint doesn't mean it can hitch a ride on the ESG rocketship. On the contrary, the share price of Cameco Corp., the world's No. 2 uranium miner, can't even keep up with Treasury bills, let alone the S&P 500 and still less with the ESG-box-ticker Ormat Technologies, Inc. (see page 4). Following is a reaffirmation of the bullish case for uranium in general and Cameco in particular, along with a few kind words for Uranium Participation Corp. (URPTF in the pink sheets), which buys and holds uranium itself, and Global X Uranium ETF, an investor in uranium miners and manufacturers of nuclear components (URA on the NYSE Arca).

We pick up where we left off not quite two years ago, when spot uranium concentrate, $\rm U_3O_8$, fetched \$23.00 a pound and Cameco \$10.45 a share (*Gram's*, June 1, 2018). Now uranium changes hands at \$24.75 a pound and Cameco at \$8.67 a share. As for Uranium Participation, which was quoted at a 9% premium to management-calculated net asset value in mid-2018, it now trades at a 11% discount to NAV.

Discouraged bulls may feel as if nothing has gone right, or right enough, but the news is better than the price action. Thus, in mid-2018, Cameco was under existential threat from a demand from the Canadian Revenue Authority that it cough up C\$2 billion in back taxes. The uranium miner won the case, and if it prevails on appeal against the sorelosing Canadian government (arguments are set for this week), it stands to reap a C\$300 million tax refund.

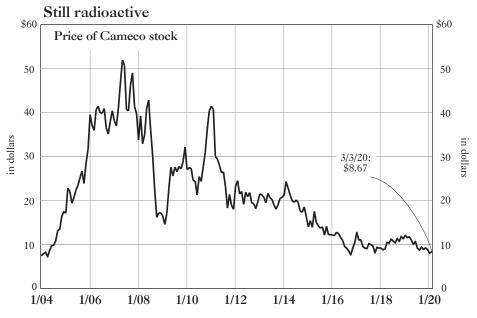
More important is the improving fundamental picture for nuclear power. For instance, at the end of 2017, utilities were carrying 2.5 years' worth of uranium inventory; at the end of 2018, the latest year on record, they were down to 2.2 years. In 2019, nuclear reactors worldwide consumed 187 million pounds of the chemical element while miners produced 140 million pounds, according to the consulting group UxC, LLC. Destocking by utilities and uranium-enrichment companies filled the hole.

Publication last fall of the 2019 edition of the biennial "Nuclear Fuel Report," a production of the World Nuclear Association, is another straw in the wind. "There has been a deceleration in the negative trend in nuclear industry development," was the not obviously bullish summary, but the change in tone was unmistak-

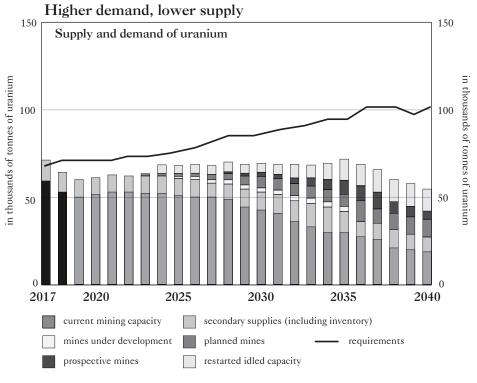
able. "For the first time since March 2011 (following the accident at Japan's Fukushima Daiichi nuclear plant)," the report continued, "this has led to a positive trend in nuclear capacity trends over the forecasting period," i.e., 2019–40.

"We do see supply certainly tightening to where the supply-and-demand balance, starting around 2022–25, is going to be fairly tight," Nick Carter, executive director of UxC, tells colleague Fabiano Santin. "We will have a gradual improvement in prices over time. The question is how quickly that happens."

"When?"—always a knotty investment question—is especially problematic with regard to uranium demand and supply. We noted as much in our premature, shall we call it, 2018 analysis: "The 'uranium



source: The Bloomberg



source: World Nuclear Association

cycle' has a timeline all its own," we said. "Supply is slow to pick up on changes in demand, and demand is slow to respond to changes in supply. It can take a decade to develop a mine or build a reactor. A decade, too, is sometimes the measure of a complete uranium price cycle, from too low to too high."

Governments naturally play a role in the market for this bomb-making chemical element. President Trump's 2021 budget last month proposed an outlay of \$150 million annually for 10 years on a new strategic uranium reserve. In response, the price of the silver-grey metal only flickered to the upside. Who knows, as one onlooker puts it, whether Congress will even pass a budget this year?

An earlier Trump executive action, in July of last year, got immediate results. Stocks of a pair of small American uranium miners plunged by 30% when the president rejected the findings of his own Commerce Department that foreign uranium "threaten[ed] to impair the national security of the United States."

Then there's the government of Kazakhstan, owner of the world's largest uranium miner, NAC Kazatomprom. While we know that Cameco has cut production in response to low prices, and hear that the Kazakhs have pledged the same, there is little true clarity. "I think what they mean when they say

'cuts," Kirk Schnoebelen, president of the uranium enricher Urenco, Inc., tells Santin, "is there are cuts to the production they planned in the past. They're not actually cuts when compared to prior years' actual production."

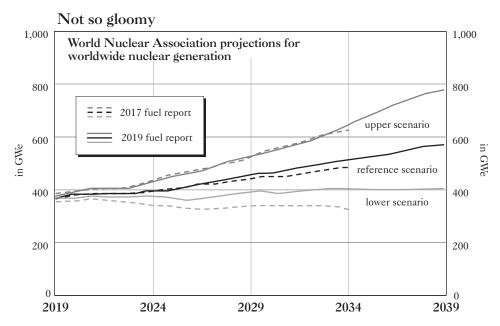
The industrial process of creating uranium has four stages: extraction, conversion, enrichment and fabrication. What begins as freshly excavated U₃O₈ ends as

fuel rods packed with enriched-uranium pellets. Start to finish, it takes up to two years (bringing a new mine into production can occupy 10 years). There's an artisanal element in it, too, as only a half-dozen operators possess the infrastructure and know-how with which to meet demand. For this reason, utilities in the past contracted with supply intermediaries, including uranium miners, for the long term. You can't afford to risk shutting down a reactor for lack of fuel.

"A potential indicator that the price of uranium concentrate is nearing a move higher is that the supply chain of nuclear fuel has tightened," Santin observes. "Thus, the cost to concentrate U₃O₈ into UF₆ has climbed by 281% since December 2017. In addition, the cost of enriching uranium, by far the priciest part of the fuel cycle, has risen by 38% since the summer of 2018."

Cameco, the top North American uranium miner, produces $\rm U_3O_8$ concentrate and owns a conversion facility, too, one of four currently operating. That the whole is marginally profitable is mainly thanks to years of production curtailments. The balance sheet shows C\$1.5 billion in working capital, which becomes C\$500 million after subtracting total debt. Last year's C\$300 million in adjusted earnings before interest, taxes, depreciation and amortization, calculated after subtracting capital expenditures, easily covered interest expense of C\$63 million.

Cameco commands an enterprise value of \$3.3 billion, a fraction of the \$20.3



source: World Nuclear Association

billion quoted in 2007, when the U.S.-listed shares changed hands above \$55, compared with \$8.67 today.

In 2017, the company suspended operations at the McArthur River and Key Lake mines for what was supposed to have been 10 months. Before long, the suspension became indefinite, and from the 2015 peak of 28.4 million pounds, annual production has fallen to 9 million pounds. Management says it will turn on the lights again when prices so warrant (which they do not yet do).

Even so, Cameco has managed to deliver some 30-odd million pounds of $\rm U_3O_8$ a year—and still break even—by picking up material in the spot market. On the Feb. 7 earnings call, CEO Tim Gitzel said he is "growing more optimistic," given the shrinking long-term supply. Or perhaps one should say "evident" long-term supply, since one-fifth of annual uranium stocks shows up on the market from often obscure inventories.

The demand side, too, said Gitzel, is looking up. Thus, last year the company signed up to deliver 36 million pounds through long-term contracts (5 to 10 years), more than the 31.5 million pounds it sold for \$33.77 a pound in 2019. "Although Cameco doesn't

discuss the terms of its new contracts," Santin reports, "it seems reasonable to assume that they have negotiated some floor at or above current levels, given that Cameco's cost of production is on the order of \$30 a pound."

Let it be clear that bulls aren't the only creatures in the uranium market. Bears and skeptics keep them company, including the well-informed Steve Kidd, former World Nuclear Association deputy director general and author of informative uranium-research pieces that you can find with a Google search.

"My view," Kidd advises by email, "is that the utilities feel they were screwed by the long-term contracts that are now expiring (signed when uranium was \$50 and above) and are hesitant to go down that road again. In short, I think there has been a structural change in the market and we are unlikely to see a huge upswing in traditional long-term contracting."

"A 'huge upswing' is surely what bulls hope," Santin comments, "but perhaps just some upswing would be more than enough for significant returns. Cameco's management told dialers-in on last month's call that it's having trouble finding enough uranium in the spot market. 'We have to remove

the sense that the spot market is going to be there to support discretionary buying,' Grant Isaac, Cameco's CFO, said, 'and one way to do that is to buy in the spot market.'"

"This was a \$50 stock in the last cycle," Charles Norton, co-manager of the Vitium Global Fund and owner of Cameco shares, tells Santin, "and I think the upswing might be more violent this time around. These things are extremely hard to value on traditional valuation metrics, and the timing of such a move is uncertain, but we know there is a growing supply-demand imbalance and the sector has been in a 10-year bear market and we are at or near some sort of major inflection point."

Shares of Uranium Participation Corp., which buys and holds uranium, thus removing the risk of exploration and production inherent in miners, to-day trade at the aforementioned 11% discount to the Jan. 31 net asset value. This is an illiquid fund with a \$386 million market cap and an average daily trading volume of just \$139,000. Global X Uranium ETF is smaller (\$152 million market cap) but much more liquid, with \$1 million of daily average volume.

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