

TDV Uranium Portfolio Update

Ed Bugos & Kashyap Sriram *April 9, 2020*

Cameco has signaled the bulls about a weakness in the supply chain that it may be able to exploit to get the utility companies back to the bargaining table after a decade-long hiatus.

We continue to rate the sector a STRONG BUY, timing is great for long term investors.

TDV Uranium Mini Folio

Company	Symbol	2020 Open	Last Price	YTD Return	2019 Return
Cameco	CCJ	8.9	9	1.12%	2.06%
Ur-Energy	URG	0.59	0.48	-18.64%	-4.84%
Uranium Participation Corp	TSE:U	4.1	4.33	5.61%	-4.67%
Average Return				-3.97%	-2.48%



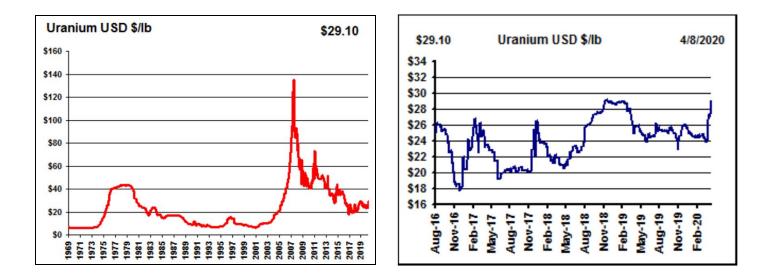
In our <u>uranium special report</u>, released on August 31, 2019, we laid out the case for why the timing was right to gain exposure to uranium in your investment strategy. We have since absorbed Cameco into the TDV portfolio.

Investment Highlights (here is our recap of the strong points from our August report):

• Uranium price continues to trend up as shares take a hit on Trump rejection of 232 petition, and remain undervalued along with uranium prices due to the after effects of the Fukushima disaster

- Demand for uranium has been growing again in China, India, and Russia with some 56 plants currently under construction around the world, 111 planned, and many more proposed
- Commodity cycle has likely bottomed
- Not too many quality liquid equity opportunities
- Low prices of uranium have dissuaded production and development of new mines

As of Wednesday, the spot price of uranium was \$29.1/lb, up 16.7% YTD and 14.9% y-o-y. That's an impressive showing, especially considering that most commodities are down for the year. While spot prices and the miners took a hit along with the rest of the market in March, prices have now started to recover, led by two significant supply side catalysts: (1) the shutdown of Cameco's Cigar Lake mine and (2) reduced production from Kazakhstan.

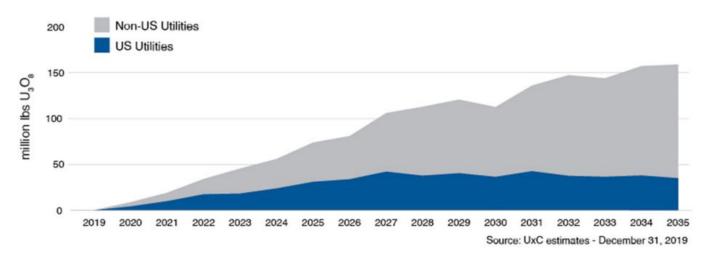


On March 23, **Cameco (NYSE: CCJ, MCap \$3.54B)** announced that it is placing the last of its mines, Cigar Lake, under care and maintenance. The decision was triggered by the Covid-19 pandemic, but the restart may or may not happen once the crisis passes - the company hinted - suggesting that the decision may be price sensitive. The announcement boosted uranium prices sharply and we believe it is another sign of a turning point. Our mini portfolio of companies in this sector have seen a significant rebound, with Cameco up 47.5%, Ur-Energy up 62.5% and Uranium Participation up 38.4% since the date of that announcement.

On Tuesday, Kazakhstan's state-owned uranium miner **Kazatomprom (FRA:oZQ, MCap €3.1B)** announced that in response to the risks posed by the Covid-19 pandemic, it will *lower* production at its mines for 3 months, with the effect of lowering its own 2020 output by 17.5%.

Kazakhstan is the behemoth of the uranium mining industry, accounting for 42% of world's supply. This move will singularly remove 7.4% of 2020 world supply. Yesterday, Cameco followed up on its decision by curtailing activities at its fuel servicing facilities in Port Hope, Ontario for four weeks. The move is not expected to have any impact on its current commitments to customers, but is nonetheless significant. Let me explain.

UTILITY UNCOVERED REQUIREMENTS (2019 - 2035)



Utilities have been reluctant to sign long-term supply agreements mainly because uranium has been in a supply glut ever since the Fukushima disaster in 2011, with excessive enrichment capacity often lying unutilized.

Recall from our previous report that natural uranium is "enriched" to "fuel-grade" in a process that increases the concentration of U235, or the radioactive component that makes up the fuel rods that go into the reactor.

i.e., Mining = > Refining = > Conversion = > *Enrichment* = > Fuel Rods

Typically, the enrichment facilities measure their work capacity in Separative Work Units (SWU). When they have excess SWUs which are unutilized, they can use their "tails", or the waste generated from the enrichment process, as a substitute for uranium produced by the miners, a process termed "underfeeding". But what if production capacity gets taken offline even at the enrichment facilities in response to the Covid-19 pandemic?

Cameco is shutting down the mining, refining, and conversion processes, effectively reducing feedstock to the enrichment facilities. The move by Cameco to suspend activities at its fuel servicing facility reveals stresses.

Such disruptions happening in the market will not go unnoticed – if supply genuinely shrinks and prices start to respond, the utilities will be forced to return to the negotiating table to iron out new long term deals.

The cost of fuel is a very minor part of the overall operating cost of running a nuclear power plant; it is well worth their while to ensure the sufficient inventory sooner rather than risk running out of fuel if the supply situation deteriorates. The recent rally has been somewhat news driven and might fade in the near term again, but otherwise our investment thesis is playing out more or less as predicted. **Continue to accumulate.**

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