

# Industry Note

Equity Research

November 17, 2021

Metals &amp; Minerals

## Uranium Weekly: Record Spot Volumes Since 2004

**The Ux Consulting (UxC) weekly spot price indicator, published earlier this week, increased to US\$47.25/lb (up US\$4.50/lb), +10.5% versus the previous week.** Reported month-to-date spot volumes of 5.8mm pounds U3O8 is tracking well ahead of November 2020 (5.1mm pounds). Year-to-date, total spot market volume of 93.6 million pounds is already the highest annual spot volumes we have on record dating back to 2004.

**Sprott Physical Uranium Trust (SPUT) continues to be a major force in the spot market, in our view.** According to SPUT's disclosures, its physical uranium holdings have increased by ~4.3mm pounds since October 30. Notably, SPUT continues to trade at a premium to NAV and, as per its fund policy, SPUT can issue new units via its At-The-Market vehicle to acquire yet more uranium in the market.

**There are some signs that energy policies in Europe could be shifting towards a more pro-nuclear stance.** On November 9, French President Emmanuel Macron announced that France will pursue the construction of new reactors to help meet its emissions reduction commitments and reduce its dependence on imported energy. Although detailed plans were not provided, France is expected to make an announcement before the end of 2021 that it will advance the construction of up to six new EPS-2 pressurized water reactors. Furthermore on November 12, Dutch news outlet, Volkskrant, reported that Netherlands' four political parties working to form the next coalition government are also discussing the construction of one or two new nuclear power stations and that the discussions are 'not so much about whether they should be built but about how much money the government wants to invest'.

**So far in 2021, ~68mm lbs of term contracting activity has been completed. Over the past decade, ~1.6bln pounds of uranium have been consumed by utilities, whereas only ~800mm lbs has been placed under long-term contracts.** Cameco management continues to expect that the coming contracting cycle will follow previous cycles and evolve into a full-blown security-of-supply contracting cycle that will see utilities competing for material (e.g. a demand-driven cycle). The most recent peak in annual term contracting volumes was ~242mm lbs in 2010. In 2020, only 53mm lbs was placed under term contracts, the lowest annual volume we have in record dating back to 2004.

**Although still relatively early, we believe that a uranium contracting cycle appears to be underway, with fund buying pushing utilities into the term market.** Increasing price volatility, tightening supply in the spot market, and an increasing realization that long-term supply is under threat following a decade-long bear market, are all contributing to nuclear utilities becoming more concerned about security of supply. We expect continued upward pressure on spot and term uranium prices in the coming months.

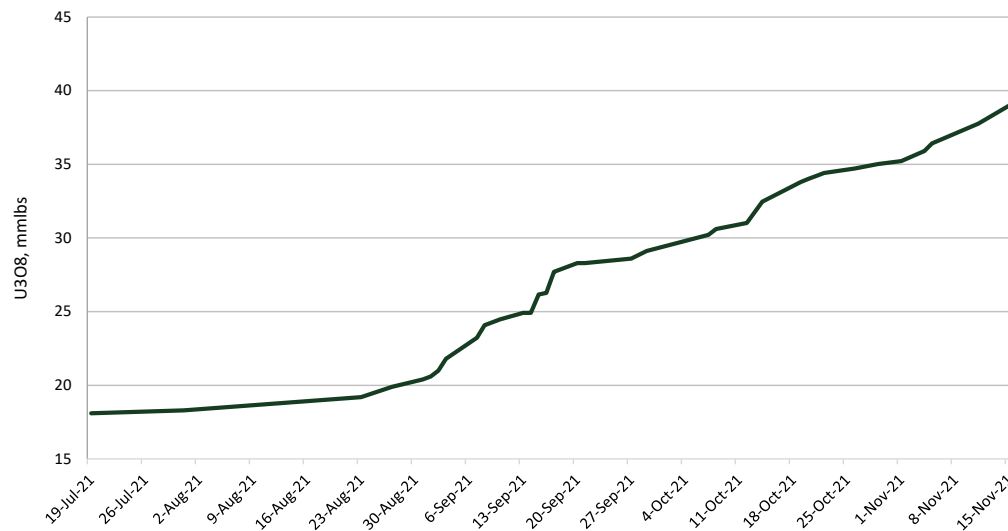
Greg Barnes

Craig Hutchison, P. Eng

Derick Ma, CFA, CPA, CA

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### Exhibit 1. Sprott Physical Uranium Trust — Uranium Holdings Since Inception (July 19, 2021)



Source: Sprott Physical Uranium Trust, TD Securities Inc. estimates

### Exhibit 2. Sprott Physical Uranium Trust — Share Price Premium to NAV



Inception date: July 19, 2021.

Source: Sprott Physical Uranium Trust

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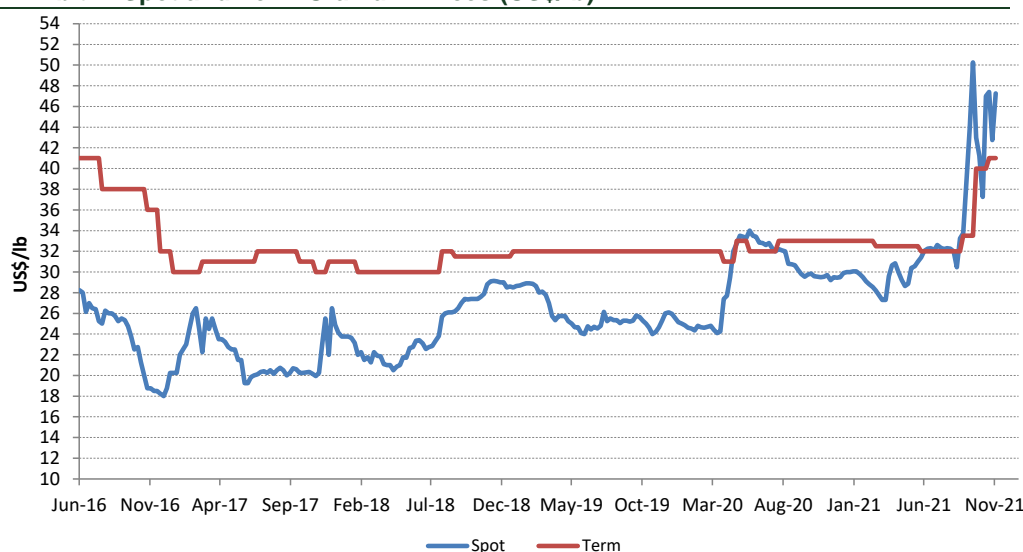
## Exhibit 3. Uranium Company Equity Offerings and Uranium Purchases (excluding Sprott Physical Uranium Trust)

Company	Date Equity Offering and/or Uranium Purchase Announced	Equity Offering (US\$ millions)	Uranium Purchased or Planned to Purchase (million pounds)	Estimated Average Price of Uranium Purchases (Planned or Actual) (US\$/lb)
Yellow Cake	25-Feb-21	140.0	3.90	28.78
Denison Mines	15-Mar-21	86.3	2.50	29.61
Uranium Energy	17-Mar-21	30.5	1.40	29.00
Boss Energy	29-Mar-21	46.0	1.25	30.15
Uranium Energy	6-Apr-21	12.0	0.71	31.70
Uranium Participation Corp. <sup>1</sup>	3-May-21	66.4	1.78	30.50
Uranium Energy	20-May-21	n/a	0.20	30.00
Yellow Cake	11-May-21	n/a	0.34	29.15
Western Uranium & Vanadium	2-Jun-21	n/a	0.13	31.50
Yellow Cake	16-Jun-21	88.0	2.00	32.23
Uranium Royalty Corp.	15-Sep-21	n/a	0.30	38.17
Uranium Royalty Corp.	19-Oct-21	n/a	0.40	45.00
Yellow Cake	26-Oct-21	150.0	3.00	46.74
<b>Total/Average</b>		<b>619.2</b>	<b>17.90</b>	<b>33.25</b>

1. TD estimate for pounds purchased and average price

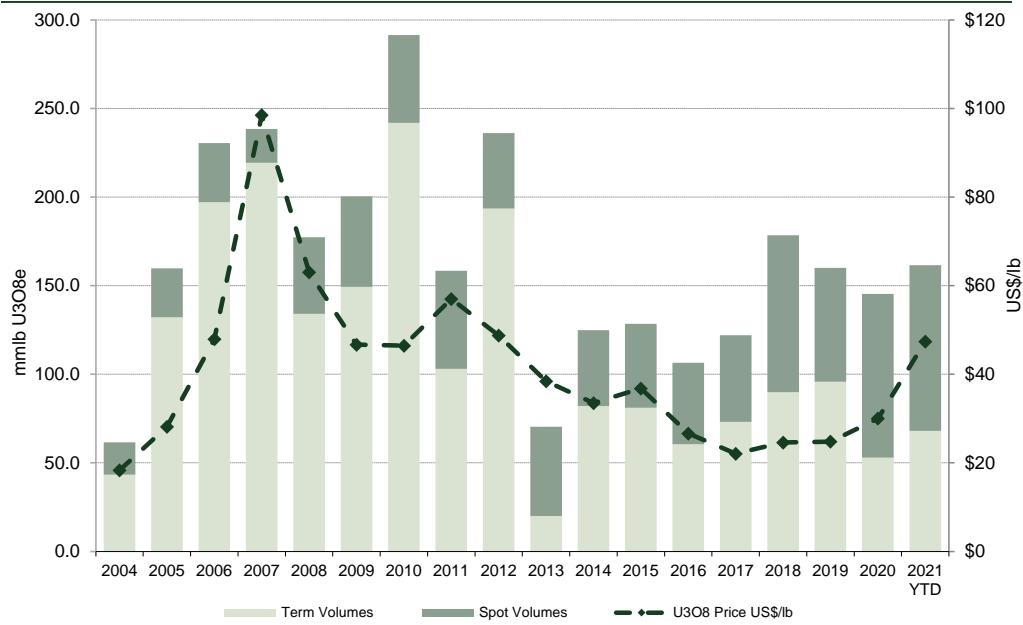
Source: Company reports; TD Securities estimates

## Exhibit 4. Spot and Term Uranium Prices (US\$/lb)



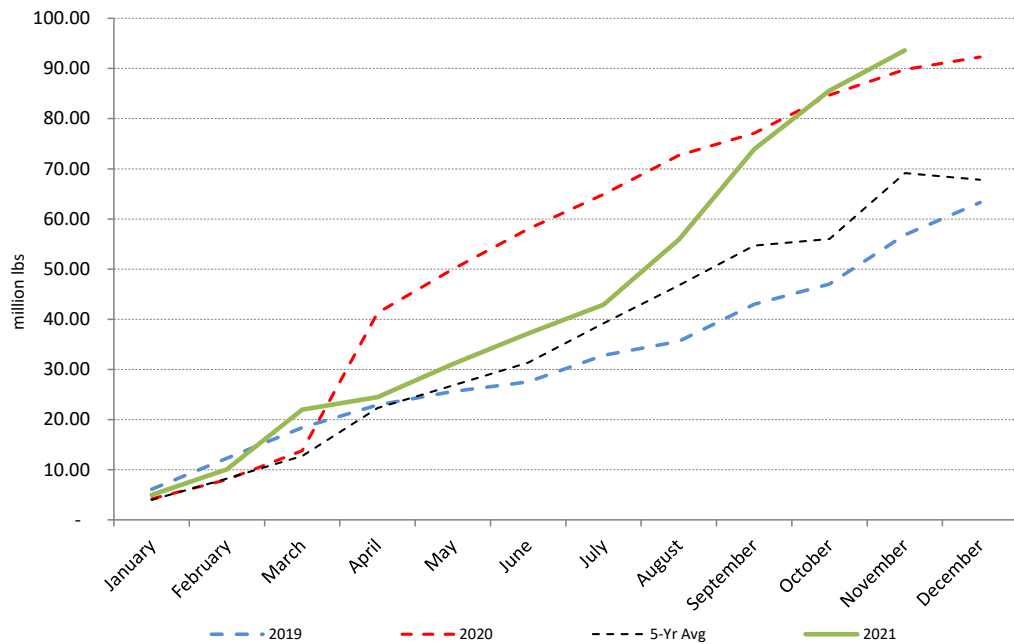
Source: UxC, TD Securities Inc. estimates

**Exhibit 5. Spot and Term Volumes**



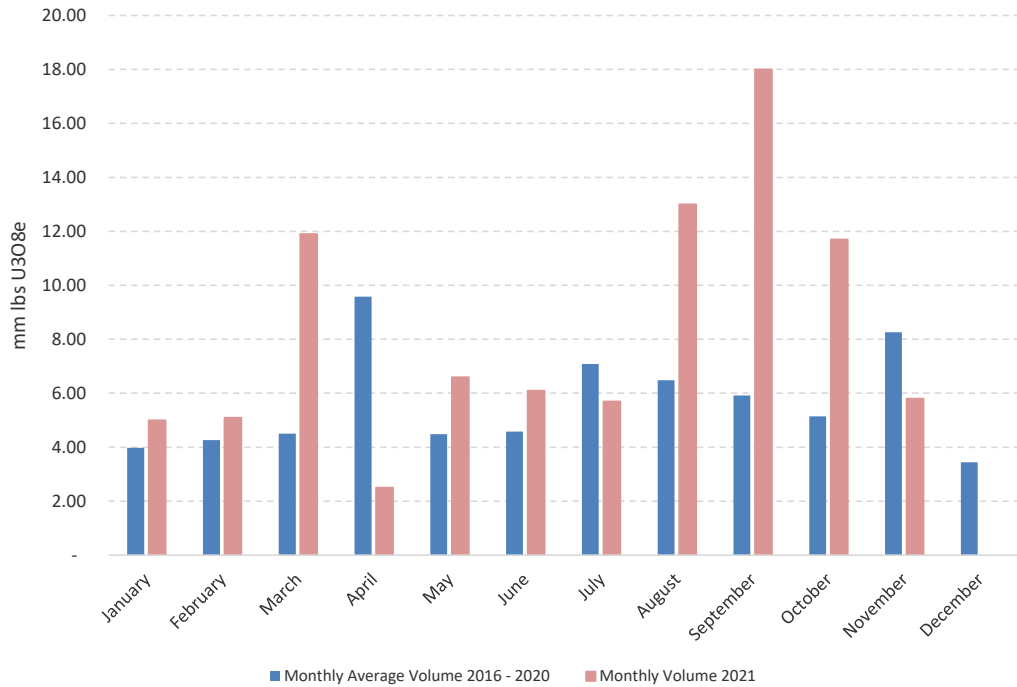
Source: UxC, TD Securities Inc. estimates

**Exhibit 6. Historical vs. 2021 Cumulative Monthly Spot Volumes**



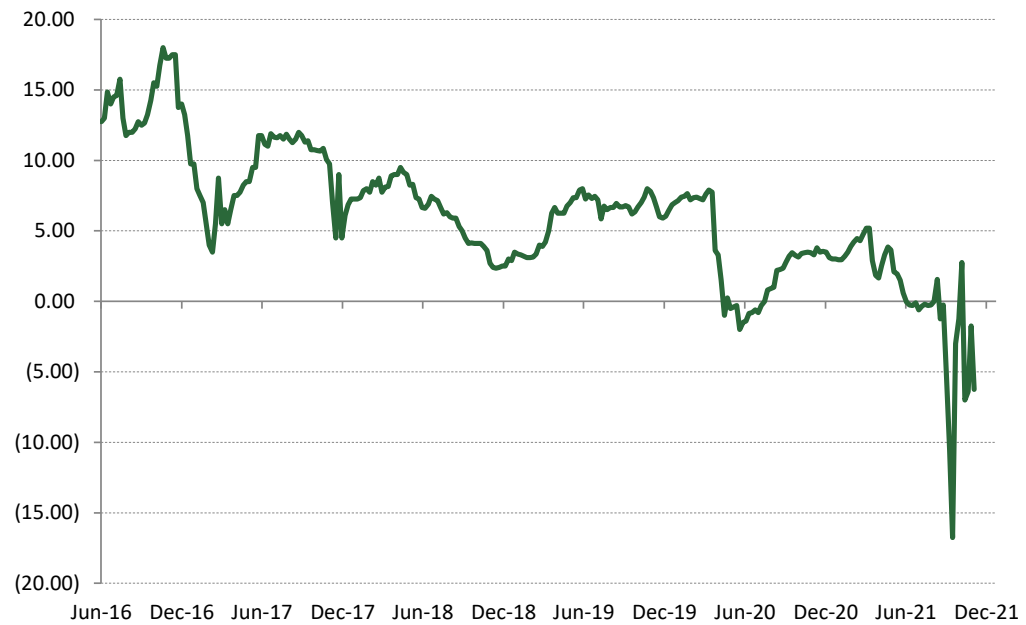
Source: UxC, TD Securities Inc. estimates

**Exhibit 7. Monthly Average Spot Volumes**



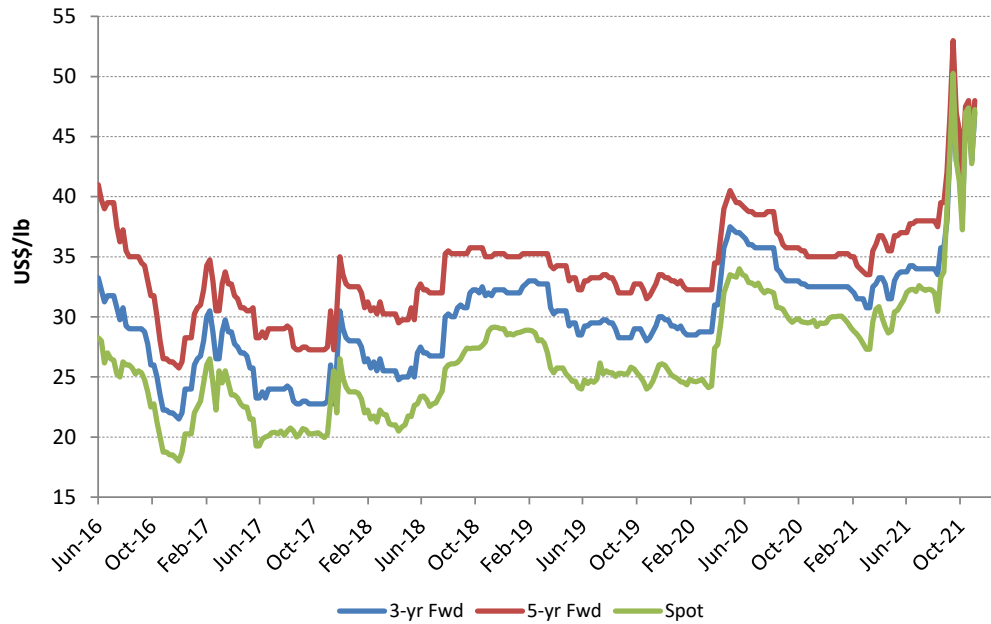
Source: UxC, TD Securities Inc. estimates

**Exhibit 8. Uranium Term Price Premium to Spot (US\$/lb)**



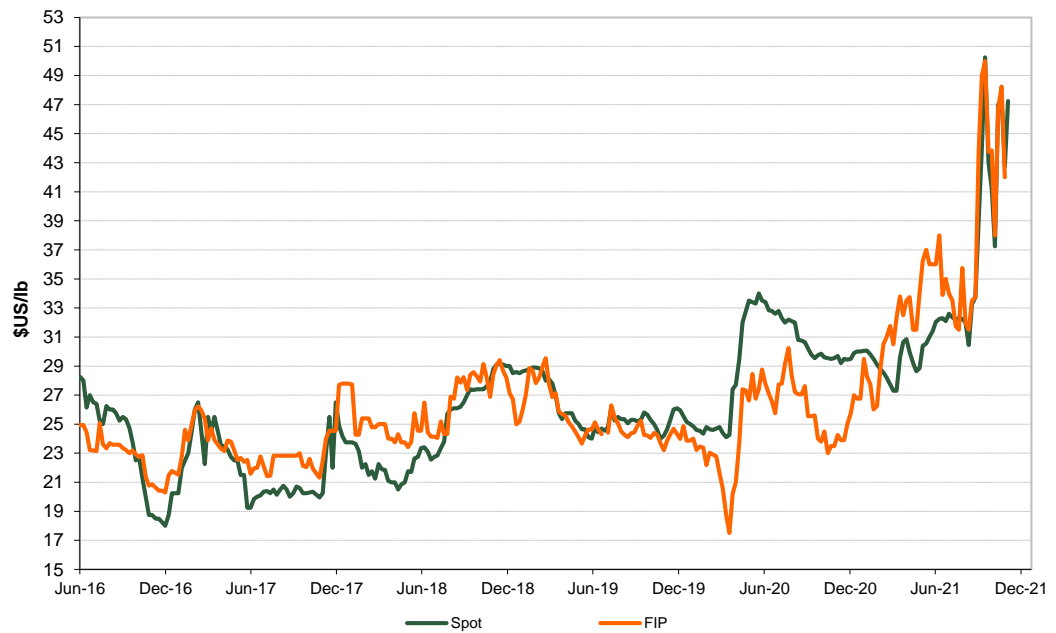
Source: UxC, TD Securities Inc. estimates

**Exhibit 9. Uranium Prices — Spot, 3-year Forward and 5-year Forward**



Source: UxC

**Exhibit 10. Fund Implied Price (FIP) and Spot Price**



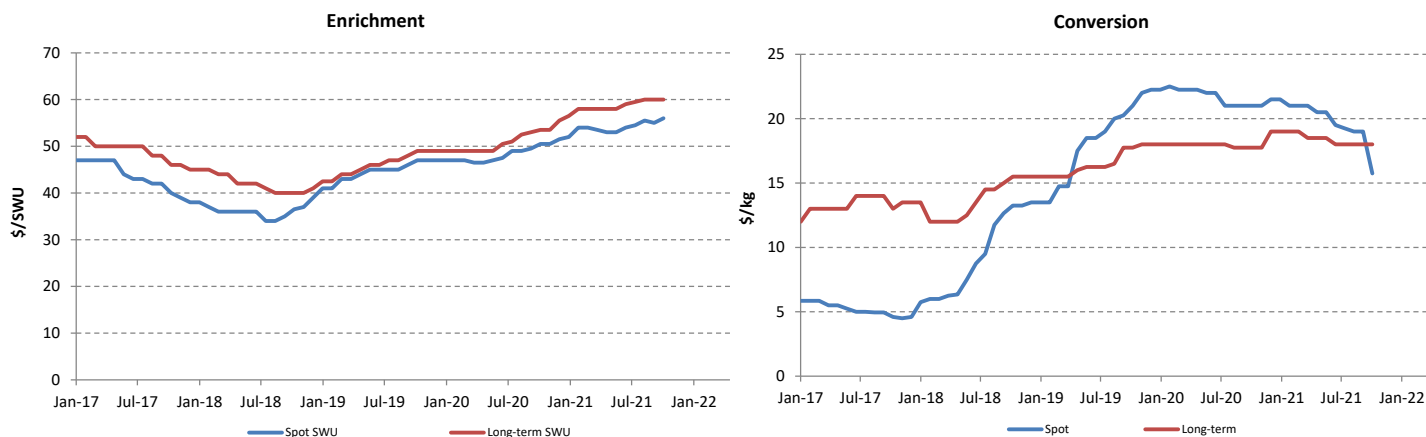
Source: UxC, TD Securities Inc. estimates

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## Exhibit 11. Monthly SWU and Conversion Pricing



Source: UxC, TD Securities Inc. estimates

## Exhibit 12. TD Securities Uranium Supply/Demand Model

	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
<b>Mine Supply - Western World (Mlb U3O8)</b>									
Total Mine Supply - Western World	100	83	85	81	75	80	85	88	86
Net Eastern Mine Supply (lbs U3O8)	54	54	55	44	52	53	60	66	72
<b>Total World Mine Supply (Mlb U3O8)</b>	<b>154</b>	<b>138</b>	<b>140</b>	<b>125</b>	<b>127</b>	<b>132</b>	<b>145</b>	<b>154</b>	<b>158</b>
YoY % change	-7.6%	-10.2%	1.7%	-10.9%	1.9%	4.0%	9.1%	6.8%	2.6%
<b>Secondary Supply</b>									
Global underfeeding and tails re-enrichment*	19	18	18	16	16	15	15	14	14
Mixed Oxide Fuel (MOX)*	5	5	6	6	6	6	6	7	8
US government sales (DOE Proposed)*	3	2	2	1	0	0	0	0	0
Additional Russian secondary supply*	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
<b>Total Secondary Supply (Mlb)</b>	<b>27</b>	<b>24</b>	<b>26</b>	<b>24</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>21</b>
Secondary supply as % of global reactor demand	16%	14%	15%	13%	12%	12%	12%	11%	11%
<b>Mobilization of Commercial Inventory</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Total Supply</b>	<b>187</b>	<b>169</b>	<b>173</b>	<b>156</b>	<b>156</b>	<b>161</b>	<b>173</b>	<b>183</b>	<b>187</b>
<b>Total World Demand</b>									
Total World Nuclear Generating Capacity (MWe) *	358,819	368,571	372,978	374,420	384,508	385,211	389,242	394,906	398,885
Uranium requirements per MWe	472	472	472	472	472	472	472	472	472
Uranium demand (mmlb)	169	174	176	177	181	182	184	186	188
First Core Requirement (2 year lead)	-	-	-	-	-	-	-	-	-
<b>Total World Demand (Mlb U3O8)</b>	<b>169</b>	<b>174</b>	<b>176</b>	<b>177</b>	<b>181</b>	<b>182</b>	<b>184</b>	<b>186</b>	<b>188</b>
YoY % change	1.7%	2.7%	1.2%	0.4%	2.7%	0.2%	1.0%	1.5%	1.0%
<b>Supply / Demand Balance (Mlb)</b>	<b>18</b>	<b>-5</b>	<b>-3</b>	<b>-21</b>	<b>-25</b>	<b>-21</b>	<b>-11</b>	<b>-4</b>	<b>-2</b>
<b>Spot Uranium Price (US\$/lb U3O8)</b>	<b>\$22.12</b>	<b>\$24.82</b>	<b>\$25.94</b>	<b>\$29.52</b>	<b>\$35.24</b>	<b>\$50.00</b>	<b>\$55.00</b>	<b>\$55.00</b>	<b>\$55.00</b>

\* Source: World Nuclear Association - Nuclear Fuel Report 2019-2040 Reference Case

Source: UxC, Bloomberg, World Nuclear Association, TD Securities Inc.



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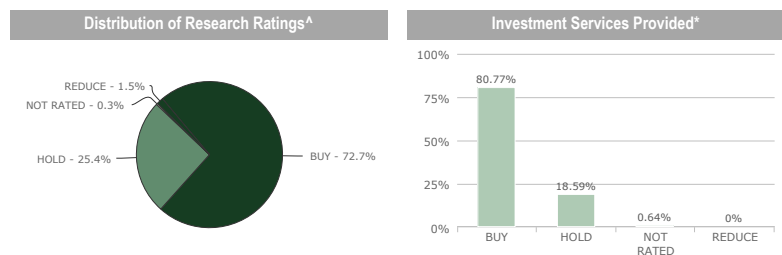
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Current as of: November 17, 2021

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