

# Industry Note

Equity Research

July 22, 2020

## Metals & Minerals

### Uranium Weekly: Utilities Focus Not on LT Fuel Procurement (Yet)

**Ux Consulting's (UxC) weekly price indicator declined this week to US\$32.00/lb (from US\$32.30/lb).**

**Over the past several weeks, although the uranium price has weakened on the back of slower volumes in the spot market and very limited volume in the term market, uranium equities have enjoyed a solid upward move.** The Horizons Global Uranium Index ETF (HURA-T) is up ~15% since the beginning of July. We believe that there are several factors behind the rally in uranium equities, including the following:

- On July 6, Kazatomprom said that it would delay the full return of production employees for another month to the end of August; however, the company maintained its 2020 production guidance of 19,000-19,500 tU (100% basis).
- In several recent interviews, Kazatomprom management has suggested that it may have to purchase uranium in the market to meet its sales commitments and maintain a sustainable uranium inventory position.
- The extension of the delay in well-field development in Kazakhstan is heightening expectations that the country's 2021 production levels will be negatively affected.
- On July 8, China Nuclear Energy Association (CNEA) released a 'blue book' report noting that nuclear power's role in the country's energy sector is expected to achieve significant growth over the next few years. CNEA suggests that China could construct between six and eight new reactors between 2020-2025 to help spur economic growth, reduce the energy sector's carbon intensity, and create more jobs.
- Last week, U.S. Presidential contender Joe Biden released his \$2 trillion Plan for Climate Change. Under Biden's plan, funds would be advanced to investigate small modular reactors and to "support a research agenda... to look at issues, ranging from cost to safety to waste disposal systems, that remain an ongoing challenge with nuclear power today".

**Despite the building optimism, the uranium term market remains very quiet.** UxC estimates that >25mm lbs has been transacted in the term market year-to-date; this compares with ~40mm lbs at this time last year. In a recent interview, Riaz Rizvi, Kazatomprom's Chief Commercial Officer, noted that utilities have had more pressing concerns this year than long-term fuel procurement and have been more focused on conversion and enrichment contracts when it comes to the fuel cycle. However, he also noted that utilities will turn back to their uranium requirements "sooner rather than later" — perhaps in H2/20 or 2021.

**We continue to believe that the timing of primary production restarting at Cigar Lake and well field development resuming in Kazakhstan will be influenced not only by the relaxation of COVID-19 restrictions, but also by commercial considerations.** The catalyst that could support the next up-leg in the spot (and term) price would be the return of utilities to the term contracting market, in our view.

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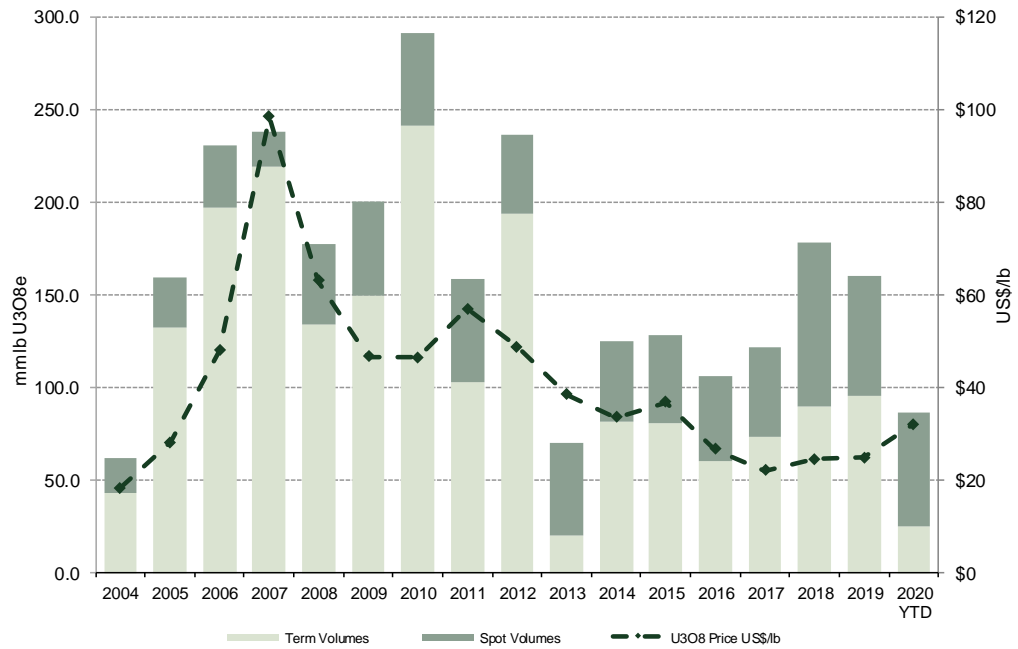


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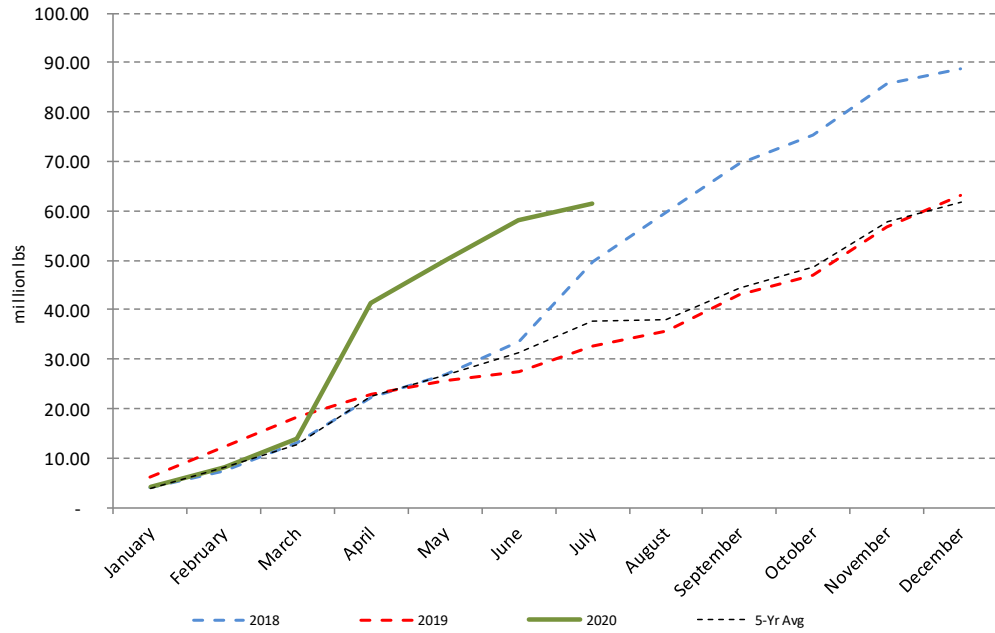
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**Exhibit 1. Term Contracting Volumes Lagging in 2020**



Source: UxC

**Exhibit 2. Historical vs. 2020 Cumulative Monthly Spot Volumes**



Source: UxC

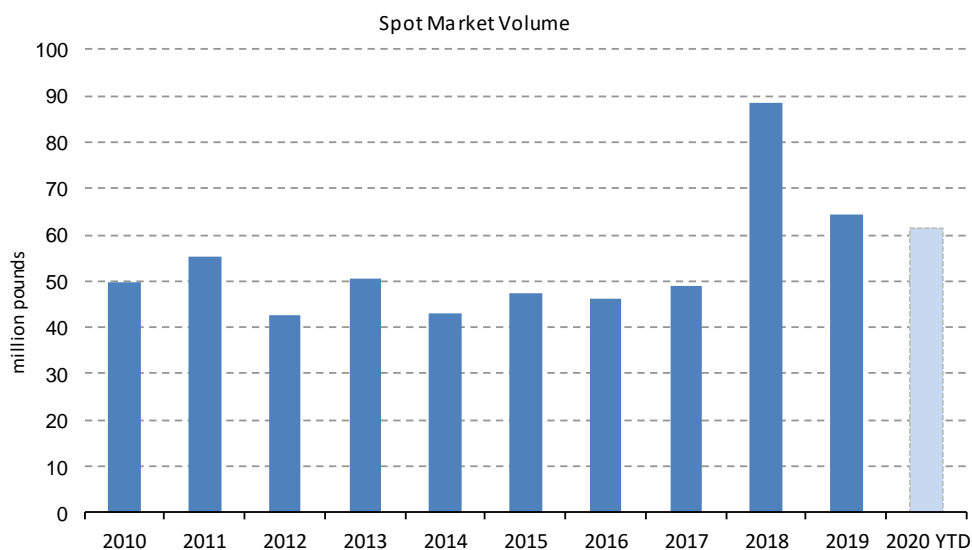


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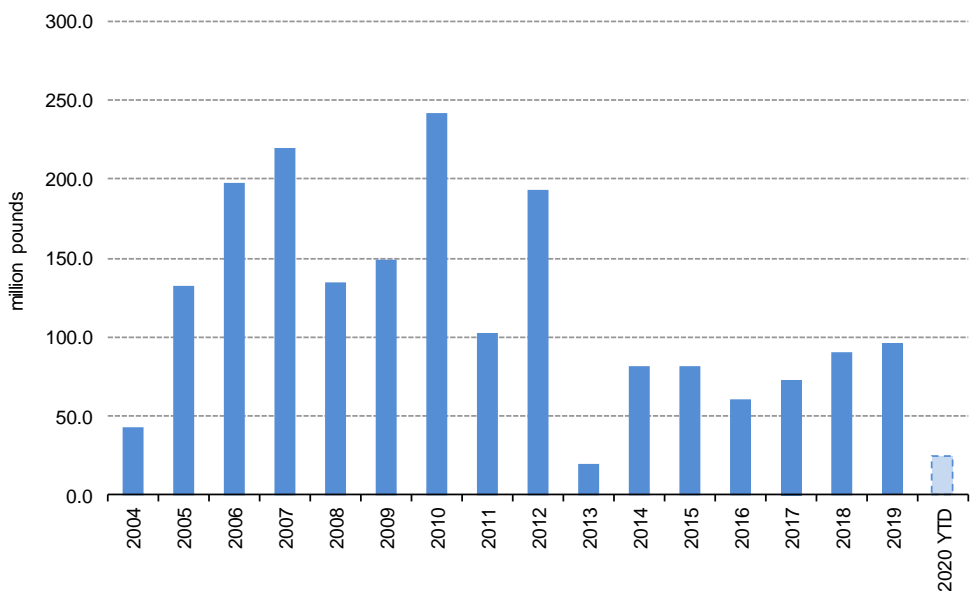
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**Exhibit 3. Historical vs. 2020 (YTD) Spot Volumes**



Source: UxC

**Exhibit 4. Historical vs. 2020 (YTD) Term Volumes**



Source: UxC



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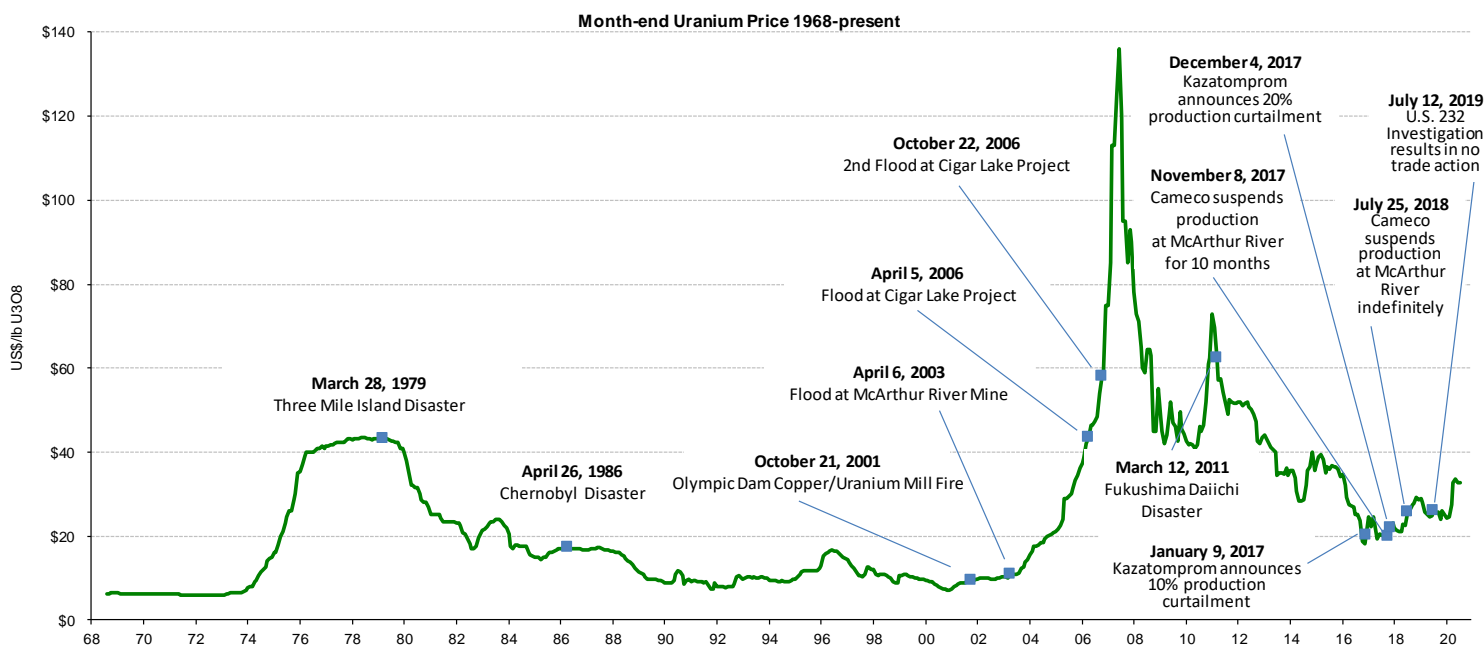
## Exhibit 5. Uranium Mine Suspension Tracker

Operation	Company	Location	Annual Production (mm lbs)	Percent of Global Annual Mine Production	Suspension Duration	Potential Lost Production (mm lbs)
Cigar Lake	Cameco/Orano	Canada	18	12.5%	Undetermined	1.5/month
Rossing	CNNC/CGN	Namibia	4	2.8%	21 days	0.25
Husab	CNNC/CGN	Namibia	10	6.9%	21 days	0.6
Ranger (1)	ERA	Australia	3.1	2.2%	n/a	n/a
Kazakh ISR (2)	Kazatomprom	Kazakhstan	59	41.0%	3 months	10.4

**Notes:**  
 (1) ERA has maintained 2020 production guidance at 2.65-3.53 mm lbs U3O8, but travel restriction could impact production

Source: Company reports, UxC, TD Securities Inc. estimates

## Exhibit 6. Historical Spot Price and Market-affecting Events (US\$/lb)



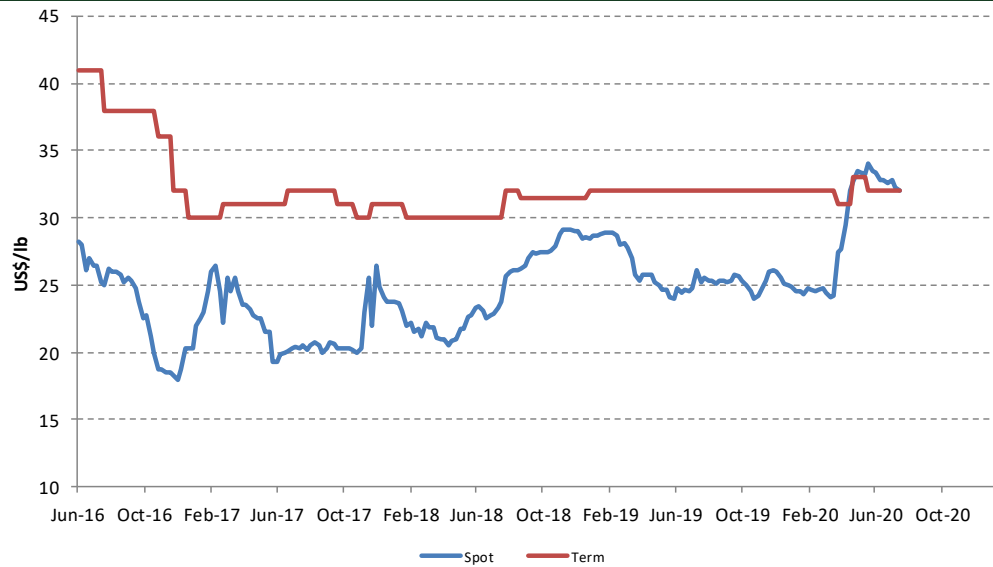
Source: UxC, companies, TD Securities Inc.

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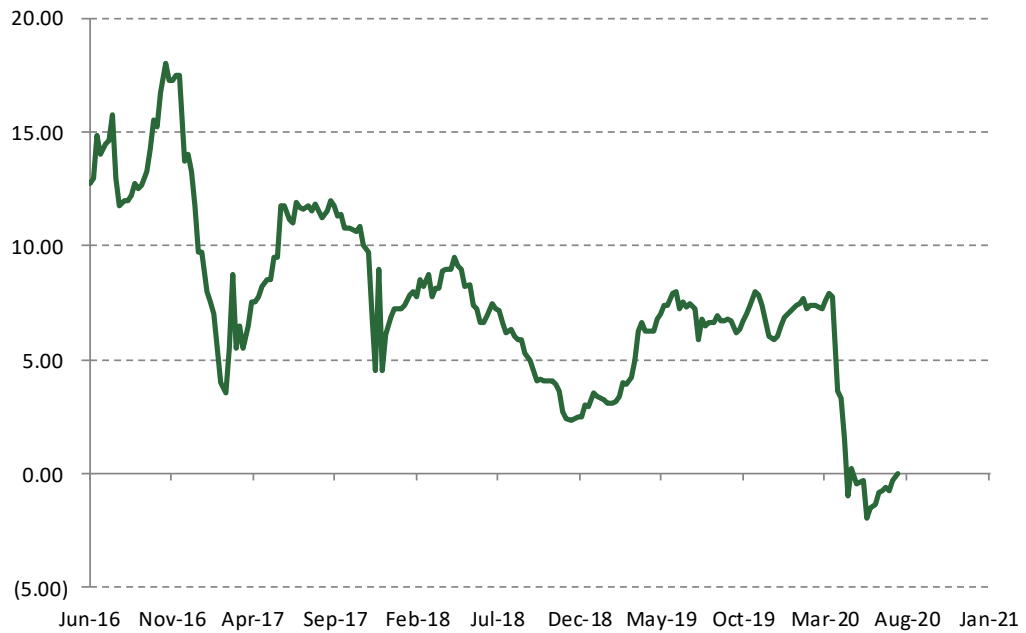
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**Exhibit 7. Spot and Term Uranium Prices (US\$/lb)**



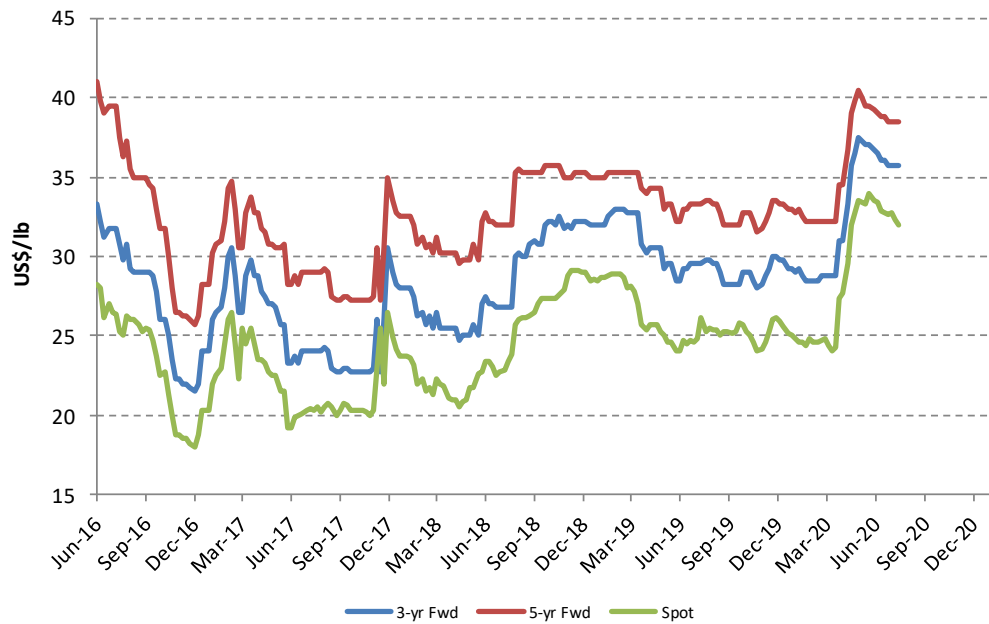
Source: UxC

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



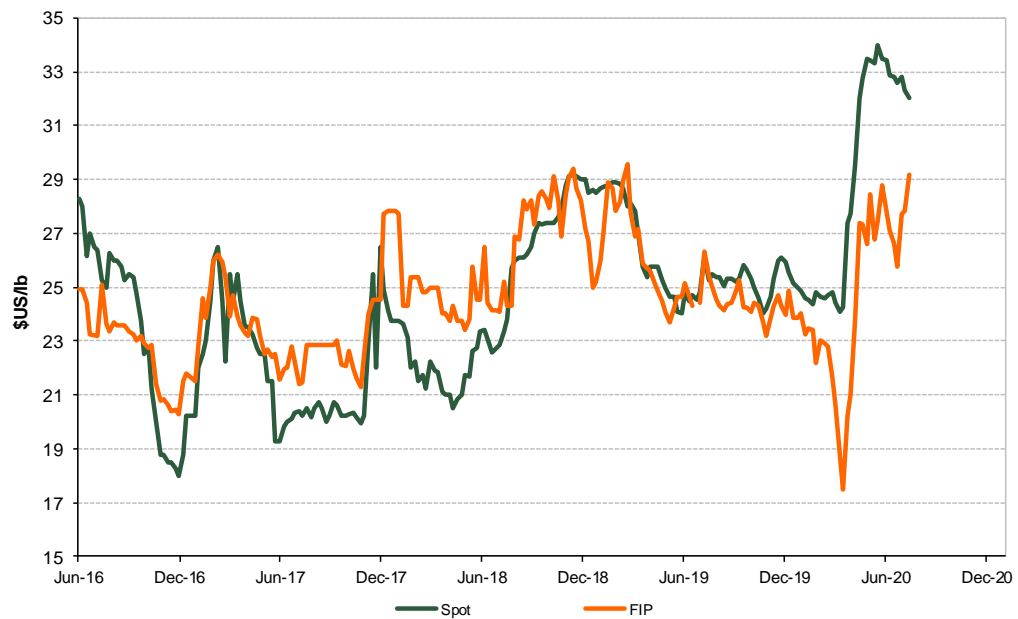
Source: UxC

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



Source: UxC

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



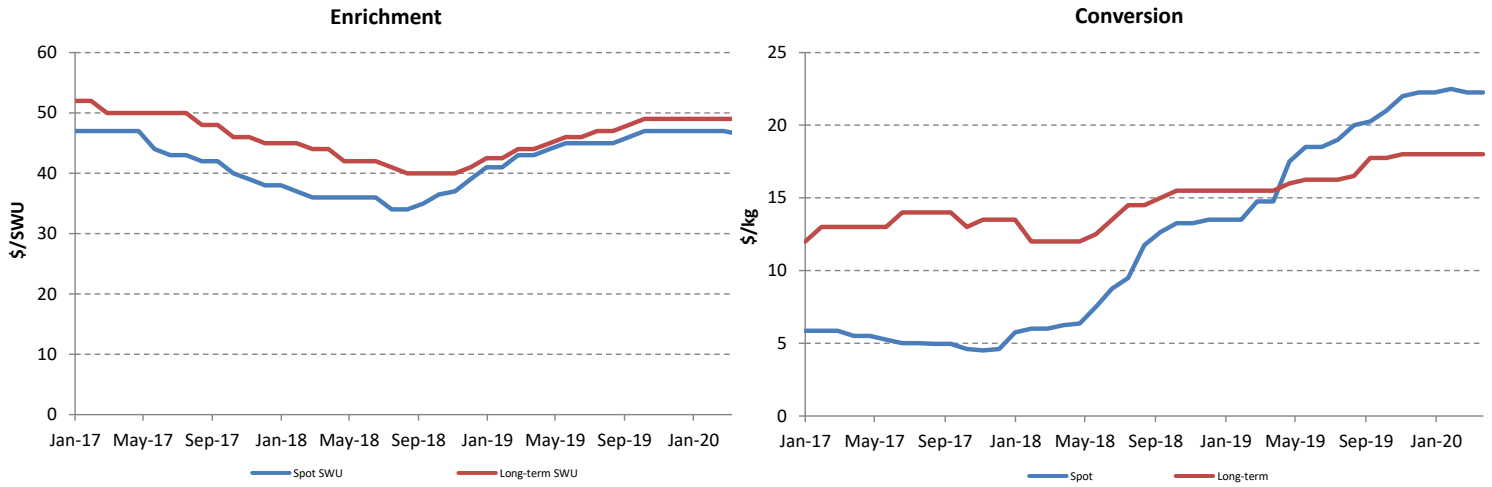
Source: UxC

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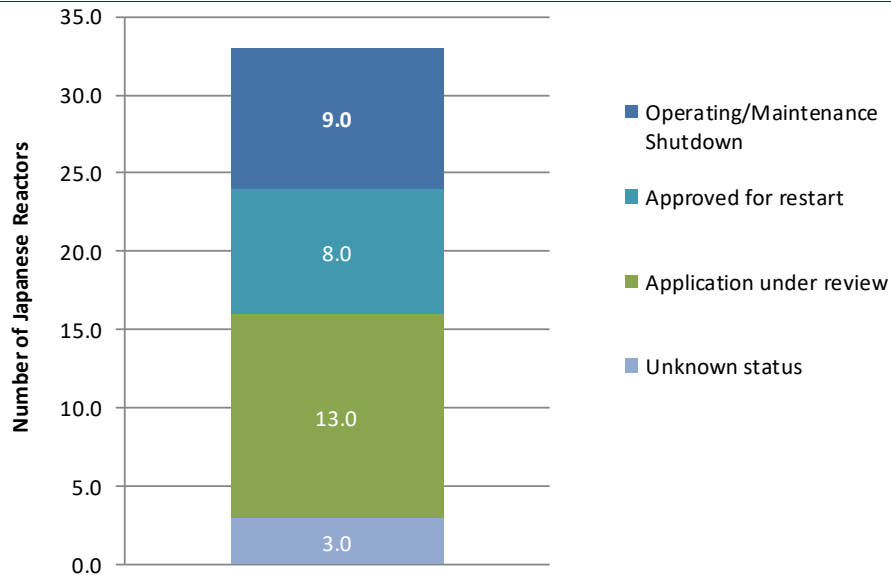
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**Exhibit 11. Monthly SWU and Conversion Pricing**



Source: UxC

**Exhibit 12. Japanese Reactor Status**



Source: UxC, Bloomberg, World Nuclear Association

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## Exhibit 13. TD Securities Uranium Supply/Demand Model

	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
<b>Mine Supply - Western World (mm lbs U3O8)</b>													
Total Mine Supply - Western World	90	93	85	106	104	100	83	85	74	82	82	86	88
Net Eastern Mine Supply (lbs U3O8)	59	60	60	57	62	54	54	55	44	49	60	60	66
<b>Total World Mine Supply (mmlb U3O8)</b>	<b>150</b>	<b>153</b>	<b>145</b>	<b>163</b>	<b>166</b>	<b>154</b>	<b>138</b>	<b>140</b>	<b>118</b>	<b>131</b>	<b>142</b>	<b>146</b>	<b>154</b>
YoY % change	5.9%	2.4%	-5.3%	12.2%	2.1%	-7.6%	-10.2%	1.7%	-15.9%	10.9%	8.6%	2.6%	5.9%
<b>Secondary Supply</b>													
Global underfeeding and tails re-enrichment*	5	15	20	20	18	19	18	18	16	16	15	15	14
Mixed Oxide Fuel (MOX)*	10	8	8	4	5	5	5	6	6	6	6	6	7
US government sales (DOE Proposed)*	5	8	8	7	4	3	2	2	1	0	0	0	0
Additional Russian secondary supply*	24	24	5	2	2	0	0	0	0	0	0	0	0
Other			0	0	0	0	0	0	0	0	0	0	0
<b>Total Secondary Supply (mmlb)</b>	<b>43</b>	<b>55</b>	<b>41</b>	<b>34</b>	<b>29</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>
Secondary supply as % of global reactor demand	28%	32%	26%	21%	17%	16%	14%	15%	13%	12%	12%	12%	11%
<b>Mobilization of Commercial Inventory</b>			4	8	7	7	7	7	7	7	7	7	7
<b>Total Supply</b>	<b>193</b>	<b>208</b>	<b>190</b>	<b>205</b>	<b>202</b>	<b>187</b>	<b>169</b>	<b>173</b>	<b>149</b>	<b>160</b>	<b>170</b>	<b>174</b>	<b>183</b>
<b>Total World Demand</b>													
Total World Nuclear Generating Capacity (MWe) *				345,377	351,271	358,819	368,571	372,978	374,420	384,508	385,211	389,242	394,906
Uranium requirements per MWe				464	474	472	472	472	472	472	472	472	472
Uranium demand (mmlb)				160	167	169	174	176	177	181	182	184	186
First Core Requirement (2 year lead)				-	-	-	-	-	-	-	-	-	-
<b>Total World Demand (mmlbs U3O8)</b>	<b>155</b>	<b>170</b>	<b>155</b>	<b>160</b>	<b>167</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>
YoY % change	0.0%	9.7%	-8.8%	3.4%	3.9%	1.7%	2.7%	1.2%	0.4%	2.7%	0.2%	1.0%	1.5%
<b>Supply / Demand Balance (mmlb)</b>	<b>38</b>	<b>38</b>	<b>35</b>	<b>44</b>	<b>35</b>	<b>18</b>	<b>-5</b>	<b>-3</b>	<b>-28</b>	<b>-22</b>	<b>-11</b>	<b>-10</b>	<b>-4</b>
<b>Spot Uranium Price (US\$/lb U3O8)</b>	<b>\$48.73</b>	<b>\$38.57</b>	<b>\$33.60</b>	<b>\$36.89</b>	<b>\$26.57</b>	<b>\$22.12</b>	<b>\$24.82</b>	<b>\$25.94</b>	<b>\$31.19</b>	<b>\$36.00</b>	<b>\$37.50</b>	<b>\$40.00</b>	<b>\$40.00</b>

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

Note - TD LT price assumption starts in 2025; a flat US\$45/lb price is assumed for 2025 and beyond.

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



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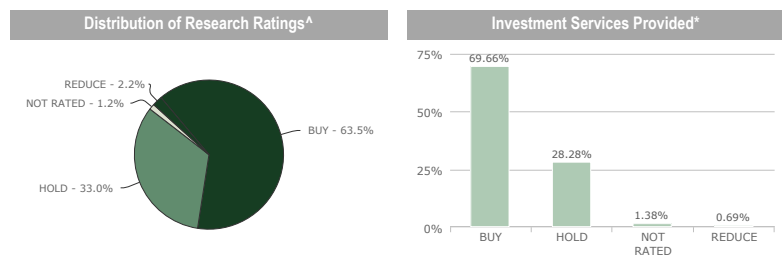
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