# Mining & Natural Resources

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Industry Comment - Changes

## Uranium: 4Q Update: LT Price Re-Affirmed by S-D, Incentive Price Analysis

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### Recommendation

We are updating our supply and demand forecasts for recent industry events and the latest data from the World Nuclear Association, Ux Consulting and other sources. We still anticipate uranium will be in a state of structural over-supply for the next five years, moving into shortfall during 2020E, as supply growth is insufficient to keep pace with demand. Production from new, large mines will be needed; accordingly, we are debuting our dynamic incentive price model for new primary supply, which further supports our long-term/equilibrium uranium price forecast of US$70/lb U3O8. Equities, perhaps impacted by market fatigue, remain disconnected from this reality, offering outstanding entry points for longer-term investors. Our top picks are CCO and URE amongst producers, plus DML and FCU in the explorer/developer group. We also flag fund UPC.

### Analysis

- **The WNA Report**. In September, the WNA released its biennial Nuclear Fuel Report – considered by some to be the most important reference document in the sector. In addition to other sources, we incorporated some of this data into our nuclear power and uranium demand models and have ignored WNA's supply projections, which we view as unrealistic relative to our price-sensitive mine-by-mine analysis.
- **RJL Supply/Demand Outlook**. We continue to project an over-supplied environment persisting over the next 4–5 years, as the ramp-up of new supply (mainly Cigar Lake and Husab) should be able to match needs for new reactors and restarts in Japan. Beyond this period, however, mine growth is slated to decline on depletions and a lack of replacement in the currently weak pricing environment, leading to ~65 Mlbs of annual deficit by 2025E. Notable changes to our model include softer estimates on China nuclear capacity (52 GW end-2020E), recently announced reactor shutdowns in Sweden and the US, Poland's pivot away from newbuild (towards coal), and numerous small tweaks to mine and secondary supply.
- **Closing the Supply Gap**. As we have outlined in the past, today's large global stockpiles – including >600 Mlbs U3O8eq held by utilities – are an overhang today, but absent changes to inventory policy, are inadequate/unavailable to fill the future gap and new large mines are needed; given these big projects are mostly hard rock, conventional mining targets, which typically take 5–10 years to permit, construct and commission, a price response is required well in advance of the deficit. Abnormally high uncovered utility requirements post-2019, which we have discussed at length previously, also remain a critical factor. Prices should begin to make a sustained move higher as old supply contracts roll-off, it becomes clear that the spot-carry/mid-term market does not have the depth to provide buyers enough material in the 2020-beyond period, pushing utilities back to traditional contracting, which by its definition provides an economic incentive to mine operators and (potential) builders; and based on our new incentive curve, ~US$70/lb is the equilibrium level.
- **RJL Price Outlook**. Today's spot price is US$36/lb and the posted term price is US$44/lb. We expect spot to rise into the US$40s/lb in 1H16E, albeit, volatility will increase if more material deemed to be excess is made available by Japanese, western European and US utilities. For 2017E/2018E, we anticipate prices to move into the US$50/60s range though sharper increases are very possible if, as we have seen in the past, utilities enter into a new contracting cycle en masse. We see US$70 LT.
- **Compressing Multiples on Fatigue**. We have adjusted our target multiples to reflect downward pressure amongst global uranium equities, which is perhaps the result of market fatigue in waiting for the contrarian thesis to play out. Nevertheless, we continue to believe long-term investors will be rewarded by taking advantage of today's attractive entry points in the highest-quality uranium equities.

| Company | Ticker(s) Primary | Secondary | Current Price | Target Price Old | New | Div. Yield | Total Return | Suitability Old | New | Rating Old | New |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uranium** | | | | | | | | | | | |
| Cameco Corp. | CCO-TSX | CCJ-NYSE | C$15.99 | C$27.00 | C$25.00 | 3% | 56% | H/GRW | H/GRW | OP2 | OP2 |
| Denison Mines Corp. | DML-TSX | DNN-NYSE MKT | C$0.49 | C$1.80 | C$1.50 | 0% | 206% | H/SPEC | H/SPEC | OP2 | OP2 |
| Fission Uranium Corp. | FCU-TSX | | C$0.57 | C$1.30 | C$1.50 | 0% | 163% | H/SPEC | H/SPEC | OP2 | OP2 |
| Kivalliq Energy Corp. | KIV-TSXV | | C$0.08 | C$0.25 | C$0.20 | 0% | 150% | H/SPEC | H/SPEC | MP3 | MP3 |
| NexGen Energy Ltd. | NXE-TSXV | | C$0.71 | R | R | R | R | R | R | R | R |
| Paladin Energy Ltd. | PDN-TSX | PDN-ASX | C$0.22 | C$0.30 | C$0.30 | 0% | 40% | H/GRW | H/GRW | MP3 | MP3 |
| UEX Corp. | UEX-TSX | | C$0.12 | C$0.50 | C$0.40 | 0% | 248% | H/SPEC | H/SPEC | OP2 | OP2 |
| Ur-Energy Inc. | URE-TSX | URG-NYSE MKT | C$0.63 | C$1.80 | C$1.70 | 0% | 170% | H/SPEC | H/SPEC | OP2 | OP2 |
| Uranium Participation Corporation | U-TSX | | C$5.20 | C$6.25 | C$6.25 | 0% | 21% | H/GRW | H/GRW | OP2 | OP2 |

Note: Target prices are for a 6-12 month period; M/INC - Medium Risk/Income, M/GRW - Medium Risk/Growth, H/GRW - High Risk/Growth, H/INC - High Risk/Income, H/SPEC - High Risk/Speculation; SB1 - Strong Buy, OP2 - Outperform, MP3 - Market Perform, UP4 - Underperform, UR - Under Review, R - Restricted.

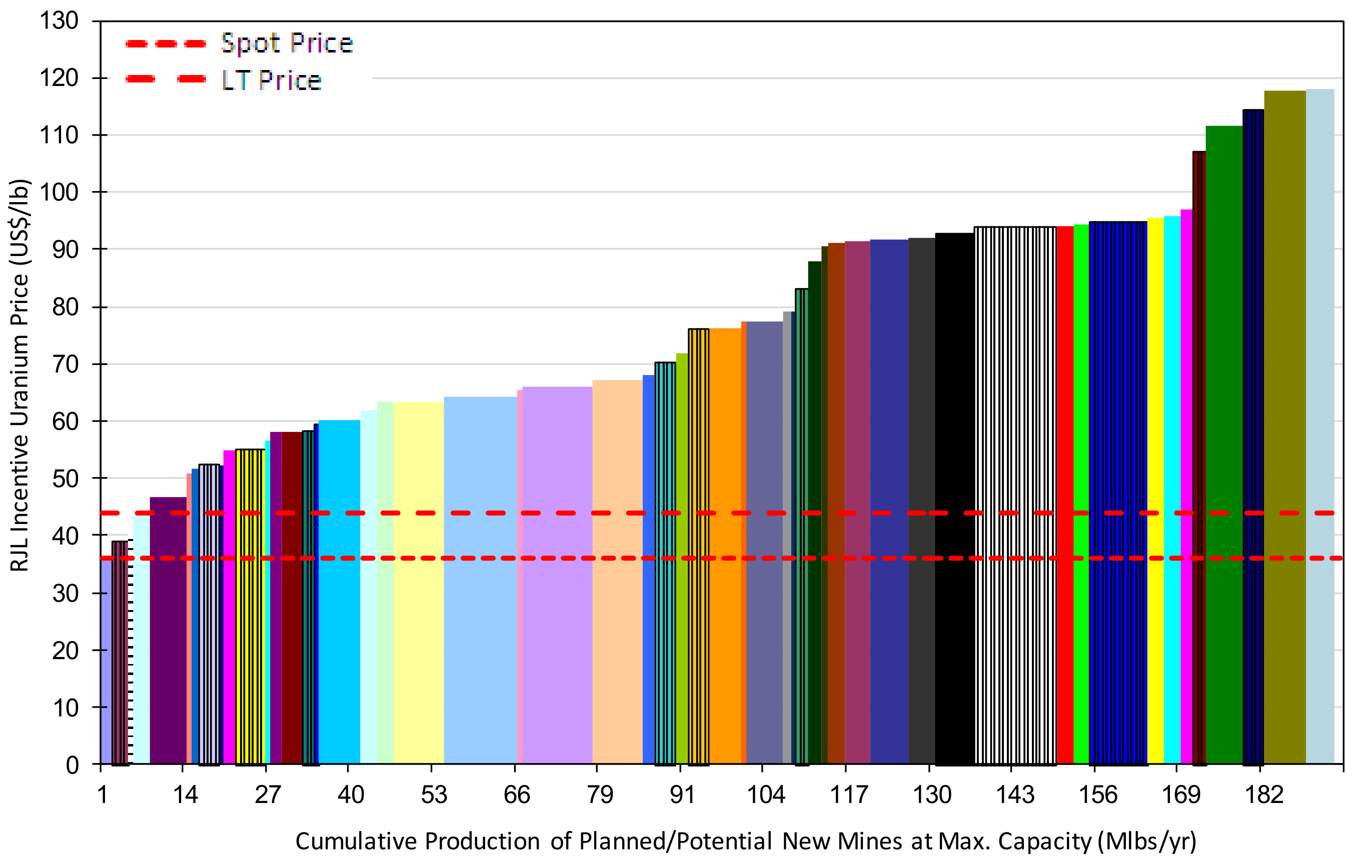
Raymond James Ltd.

## RJL Uranium Incentive Price Analysis

**The New RJL Uranium Incentive Price Curve: Methodology**. Our incentive price curve is a product of years of analysis on the economics of uranium production and is meant to represent the realized price required for new projects to receive development funding. We look at ~60 planned and potential new projects, expansions and mine restarts, build individual mine DCFs using publically-available data and/or analogues, and calculate the uranium price needed to drive a post-tax threshold rate of return. We assume higher IRRs are required for projects owned by smaller exploration/development companies, those located in high geopolitical risk jurisdictions and those exhibiting greater technical risk, while lower IRRs are needed at assets with state-backed owners given their strategic (and less economically-driven) motives and major producers, both of which have low costs of capital. Overall, threshold rates of return range from 5% to 20%. We have only included projects that could be online by 2025, the year in which we model a 65 Mlbs/year deficit (as laid out in our supply/demand update in the sections below).

**Reading the Chart**. Each bar represents an individual project, the width of which is the asset's maximum annual production rate and the height of which is the price needed to incentive that asset's development. Save for Peninsula's Lance (2 Mlbs/year, ramped), these projects are not in our reference supply-demand model discussed below and represent incremental production that could come online to meet the future supply gap. We also note the Olympic Dam copper-gold-uranium mine expansion is already included in our model (and hence not in the incentive curve) starting in 2025E.

**Exhibit 1: RJL Global Uranium Incentive Price Curve for Planned and Potential New Primary Supply (New Mines, Expansions and Restarts) at RJL Reference Scenario IRRs**




Source: Raymond James Ltd., UxC, NIW, Bloomberg, company reports and other technical disclosure

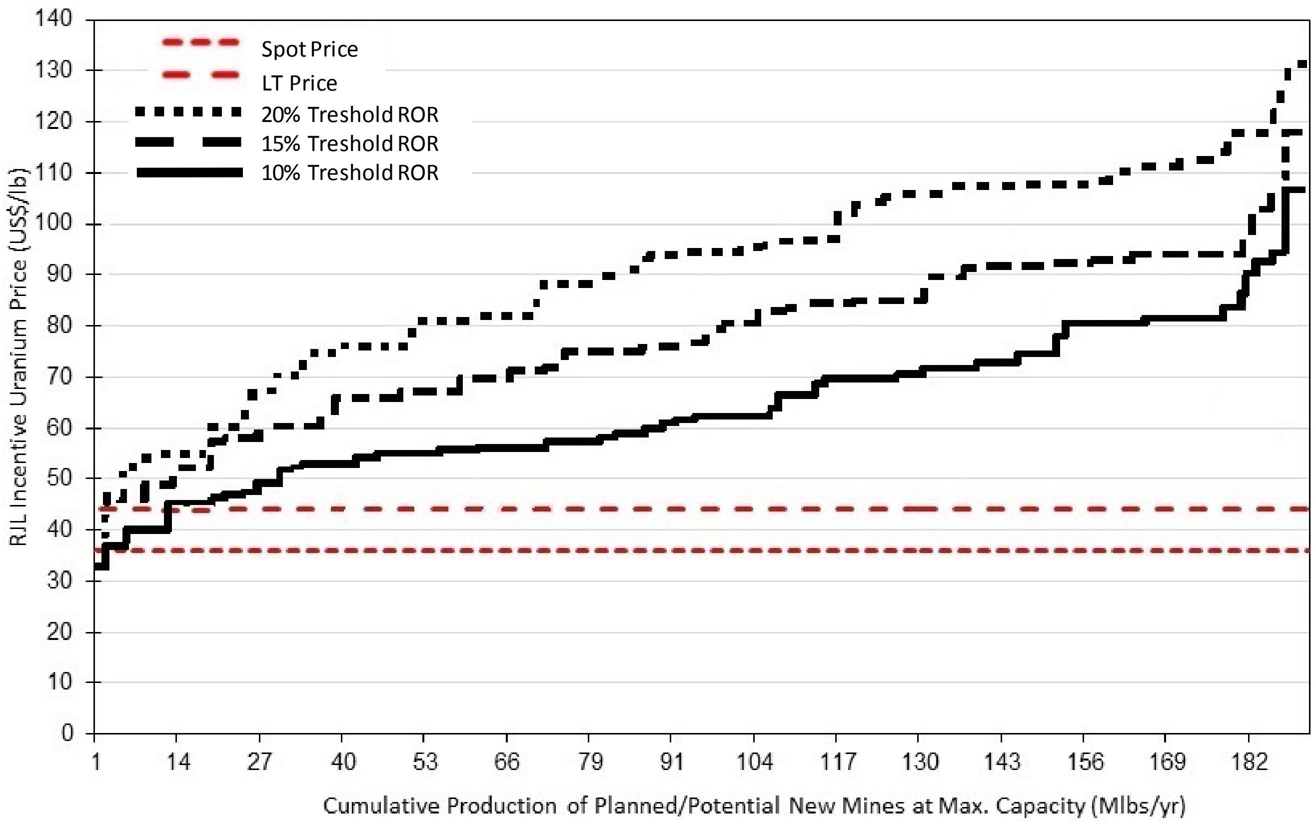
**Minimal New Supply Unless Prices Rise**. The takeaway is that very little new production is incentivized near current levels – higher prices are needed if meaningful amounts of new mine supply are to emerge. It is conceivable, though, that a quick price move into the US$50s/lb U3O8 range could spur some new production prior to 2025. Included in this 'first mover' group are:

- additional ISR production out of Kazakhstan (<10 Mlbs/year), e.g., Inkai Block 3, Zhalpak, and remaining ramp-ups
- new, non-Kazakh, small-scale ISR mines, e.g., Peninsula's Lance (Wyoming), Uranium Resources' Temrezli (Turkey), Paladin's Manyingee (Australia) and others
- conventional assets like Areva's McClean Lake, the McArthur River expansion to 25 Mlbs/year, and Millennium in Canada; and Berkeley Energy's Salamanca in Spain

But unless prices move into the US$60–US$70/lb range, development of the larger, conventional hard rock projects – like Imouraren, Yeelirrie, Arrow and Patterson Lake South that are needed to meet the 65 Mlbs/year gap in 2025 – appears economically challenged. This further supports our thesis that in the long-term, US$70/lb is an appropriate price to expect – it provides roughly the *right amount* of incentive to support development of the *right amount* of production to meet demand.

**Varying IRRs**. The model is dynamic and can be run at varying global assumptions, including threshold IRR and foreign exchange rates, and instantly revised for new royalties or taxes in any relevant jurisdiction or a shift in timing or costs at any project. For example, below are the modeled incentive price outcomes when global projects are each assumed to require 10%, 15% and 20% IRRs.

**Exhibit 2: RJL Global Uranium Incentive Price Curve for Planned and Potential New Primary Supply at 10%, 15% and 20% Threshold Rates of Return**



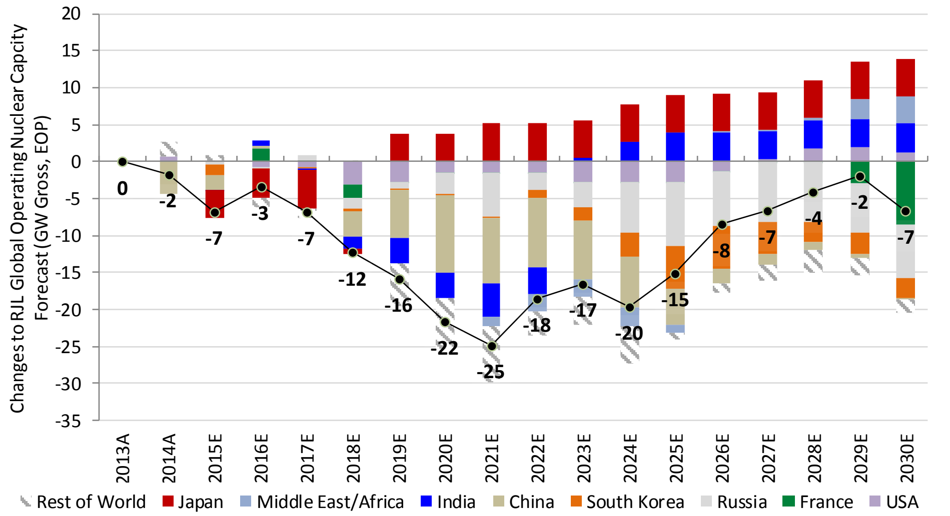

Source: Raymond James Ltd., UxC, NIW, Bloomberg, company reports and other technical disclosure

## Changes to RJL Supply/Demand Outlook

**Revisions to Nuclear Forecast Model**. We have made a series of changes to our nuclear power, uranium requirements, and global supply models. On the nuclear side, notable revisions since our last major update on Oct-22-14 and interim July-27-15 update include:

- China – 52 GW by end of 2020E, representing a ~8 GW reduction in our forecast, as delays in the start of construction of several new reactors likely will result in the country missing its 58 GW by 2020 goal by one year. This delay shifts the timing of uranium needs.
- Japan – Sendai 2 is now online and at full power, the second reactor to be restarted in the country and likely the final unit to be rebooted this year; at this time last year, we had hoped for a further five units in 2015, underlining how sluggish the approval process has been. We now project six reactors could restart in 2016E (Ikata 3 early in the year, followed by the Tomari and Genkai plants), and another dozen 2017E–2019E. We also expect two units under construction, Shimane 3 and Ohma 1, to connect to the grid in 2019E and 2021E, respectively.
- US – Utility Entergy announced that it would prematurely shut its FitzPatrick and Pilgrim plants by late-2016/early-2017 and mid-2019, respectively, on low power prices, a tough regulatory environment and disadvantageous nuclear policy. This marks the sixth and seventh reactors to close (or set to close) in the US on challenged economics. There are a small handful of other reactors similarly at risk, but with five units under construction today and 3/4ths of the existing fleet extended to 60 year operating lives, the US is still likely to remain flat or dip only slightly on overall operating capacity through 2030.
- France – We do not believe France will cut back on nuclear as aggressively as some think. The average age of the 58-reactor fleet is 30 years. These units can run without major work for 40 years and fleet operator EdF has stated it would take only €55 billion to extend the entire fleet's life beyond that. With most of the US fleet running to 60 years and the US NRC now discussing the possibility of 80 years, the decision to close any of France's PWR plants is purely political. We believe it will be a great challenge to meet the goal of 50% reliance by 2025 (which could include the closure of up to 23 reactors) and instead model a middle-ground with retirements after 50 years of operating life, starting later in the 2020s.
- Other Europe – An encouraging potential newcomer to nuclear, Poland, has stepped-back in recent days as the latest government rhetoric suggests a pivot further towards coal; we have accordingly removed the country from our model (recall, our model extends out to 2030). In the UK, meanwhile, an injection of capital by China into the Hinkley Point power project in our view reduces the risk profile of construction of the plant, which we anticipate to come online in 2025E with several more to follow. The move also bodes well for China's strategy to vie for international construction contracts and export its domestic Hualong One reactor, a lower cost offering versus competitors. And in Sweden, utility Vatenfall confirmed plans to shut Ringhals 1 & 2 by 2020 instead of extending them.

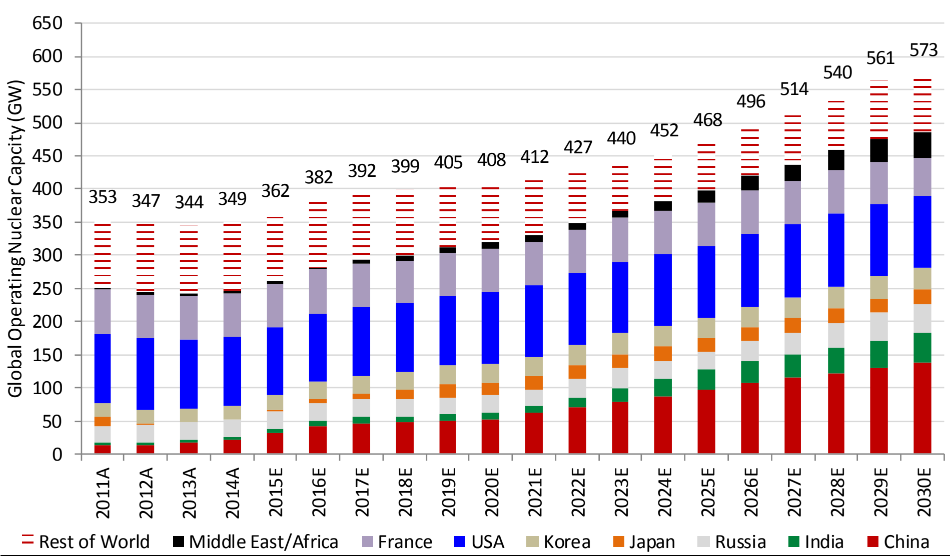
**Exhibit 3: Changes to RJL Operating Nuclear Capacity Forecast vs. our Oct-2014 Estimates, through 2030E (GW Gross, End of Period)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

**China, India and Japan Comprise 100% of Net Growth Through 2025E**. We model compound annual nuclear capacity growth rates of 2.7% through 2020E (net addition of 48 GW, gross), and 2.8% from 2020–2025 (net +61 GW). The picture becomes less clear further out, but there is good potential for an acceleration of growth with incorporation of in-land plants to China's build-out and as India and the Middle Eastern region have aggressive long-term plans. In the near-term, growth in China and India plus restarts in Japan alone represent ~100% of the global capacity rise from end-2015E to end-2025E – while output in countries like South Korea should also tick upwards, retirements of older plants in Russia, Belgium, Spain, the UK and elsewhere offset much of those gains. In aggregate, we model 67.5 GW of retirements over the next 10 years – 1/5$^{th}$ of today's global operating fleet.

**Exhibit 4: Revised RJL Operating Nuclear Capacity Forecast, by Region through 2030E (GW Gross, End of Period)**

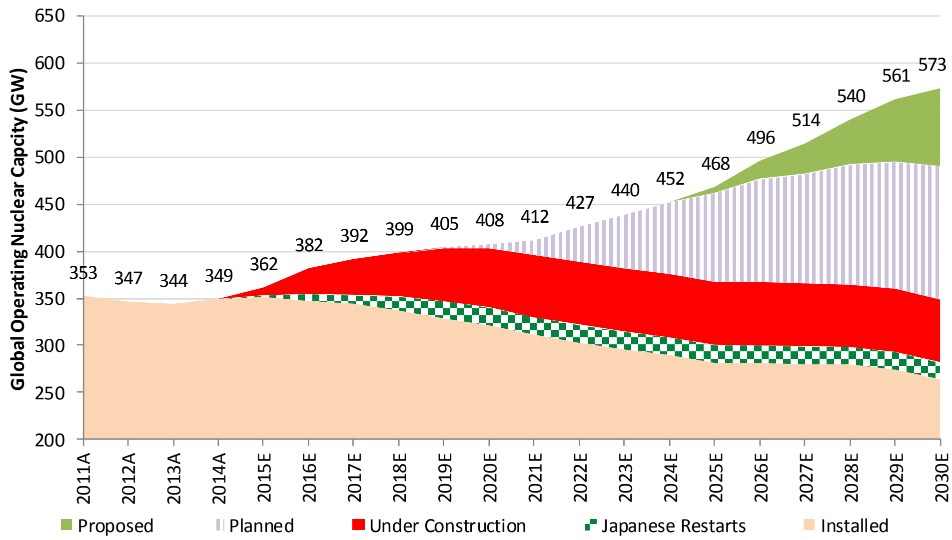



Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

We remind readers that because we are focused on uranium consumption, the metric we forecast is operating capacity (not *operable* capacity) and on a gross basis (not a *net* basis, which is a measurement reflective of just the power going to the grid).

**Capacity Forecast Through 2020 Fairly De-risked**. Given long construction timelines in nuclear, we are quite comfortable with our 2020E operating gross capacity target of 411 GW as nearly all those units are either already running, with the exception of the restarting Japanese fleet, or are under construction today. As mentioned, further out, the picture is less clear as we are relying upon completion of units in the so-called 'Planned' category, which have received approval and funding, but where no concrete has yet been poured.

**Exhibit 5: Revised RJL Operating Nuclear Capacity Forecast, by Development Category and Restarting Japanese Reactors through 2030E (GW Gross, End of Period)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

**RJL Conservative vs. WNA Reactor Tally**. The table below shows how our modeling stacks up against the WNA's latest global tally for under construction, planned and proposed reactors. While 96% of the association's units under construction appear in our model (i.e., connect to the grid before 2030), only 23% of proposed reactors are included in our numbers. Further, we model only eight new nuclear countries by 2030: UAE (2017E), Belarus (2020E), Lithuania (2024E), Turkey (2024E), Jordan (2026E), Bangladesh (2026E), Saudi Arabia (2028E), and Vietnam (2029E); WNA projects 12 new entrants in their reference scenario.

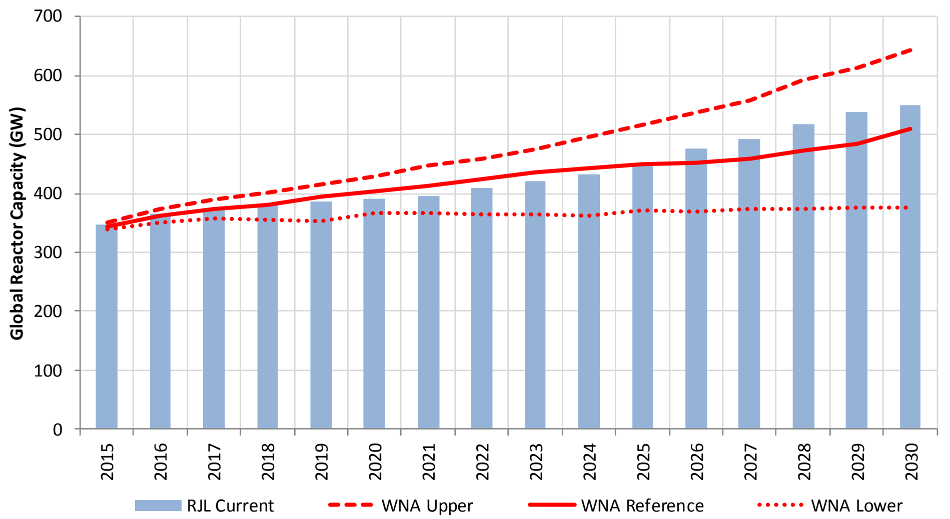
**Exhibit 6: Revised RJL Nuclear Capacity Forecast, by Development Category and Country vs. WNA Global Reactor Tally (GW Net for Installed, GW Gross Otherwise; End of Period; Excludes Retirements)**

| | Currently Installed | | | Under Construction | | | Planned | | | Proposed | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Region** | WNA | RJL | *% of WNA* | WNA | RJL | *% of WNA* | WNA | RJL | *% of WNA* | WNA | RJL | *% of WNA* | WNA | RJL | *% of WNA* |
| China | 23.1 | 23.1 | *100%* | 27.4 | 26.3 | *96%* | 50.0 | 50.7 | *101%* | 153.0 | 36.3 | *24%* | 253.5 | 136.4 | *54%* |
| India | 5.3 | 5.3 | *100%* | 4.3 | 4.3 | *100%* | 21.3 | 19.2 | *90%* | 40.0 | 15.0 | *38%* | 70.9 | 43.8 | *62%* |
| Japan | 40.5 | 40.5 | *100%* | 3.0 | 2.8 | *91%* | 12.9 | 0.0 | *0%* | 4.1 | 0.0 | *0%* | 60.6 | 43.2 | *71%* |
| South Korea | 21.7 | 21.7 | *100%* | 5.6 | 5.6 | *100%* | 11.6 | 8.6 | *74%* | 0.0 | 0.0 | *nm* | 38.9 | 35.9 | *92%* |
| Russia | 25.3 | 25.3 | *100%* | 8.0 | 7.9 | *99%* | 33.3 | 24.6 | *74%* | 16.0 | 6.0 | *38%* | 82.5 | 63.8 | *77%* |
| Other Asia | 5.3 | 5.3 | *100%* | 2.7 | 0.0 | *0%* | 8.9 | 5.9 | *66%* | 14.3 | 0.0 | *0%* | 31.2 | 11.2 | *36%* |
| Canada | 13.6 | 13.6 | *100%* | 0.0 | 0.0 | *nm* | 1.5 | 0.0 | *0%* | 3.8 | 0.0 | *0%* | 18.9 | 13.6 | *72%* |
| USA | 98.8 | 98.8 | *100%* | 6.0 | 6.0 | *100%* | 6.1 | 3.6 | *59%* | 26.0 | 0.0 | *0%* | 136.9 | 108.4 | *79%* |
| Other Americas | 5.1 | 5.1 | *100%* | 1.4 | 1.4 | *100%* | 2.0 | 0.8 | *41%* | 11.7 | 0.7 | *6%* | 20.2 | 8.1 | *40%* |
| France | 63.1 | 63.1 | *100%* | 1.8 | 1.8 | *100%* | 0.0 | 0.0 | *nm* | 1.8 | 0.0 | *0%* | 66.6 | 64.9 | *97%* |
| United Kingdom | 9.4 | 9.4 | *100%* | 0.0 | 0.0 | *nm* | 6.7 | 6.7 | *100%* | 8.9 | 2.8 | *31%* | 25.0 | 18.8 | *75%* |
| Ukraine | 13.1 | 13.1 | *100%* | 0.0 | 0.0 | *nm* | 1.9 | 2.0 | *105%* | 12.0 | 2.4 | *20%* | 27.0 | 17.5 | *65%* |
| Other Europe | 51.2 | 51.2 | *100%* | 5.0 | 5.1 | *101%* | 15.7 | 7.6 | *48%* | 13.0 | 1.2 | *9%* | 85.0 | 65.1 | *77%* |
| Saudi Arabia | 0.0 | 0.0 | *nm* | 0.0 | 0.0 | *nm* | 0.0 | 0.0 | *nm* | 17.0 | 3.6 | *21%* | 17.0 | 3.6 | *21%* |
| Turkey | 0.0 | 0.0 | *nm* | 0.0 | 0.0 | *nm* | 4.8 | 4.8 | *100%* | 4.5 | 3.4 | *75%* | 9.3 | 8.2 | *88%* |
| UAE | 0.0 | 0.0 | *nm* | 4.2 | 5.6 | *133%* | 1.4 | 0.0 | *0%* | 14.4 | 5.6 | *39%* | 20.0 | 11.2 | *56%* |
| Other MidEast/Africa | 3.5 | 3.5 | *100%* | 0.7 | 0.7 | *100%* | 8.7 | 6.4 | *74%* | 24.5 | 5.6 | *23%* | 37.4 | 16.2 | *43%* |
| **Total** | **379.0** | **379.0** | ***100%*** | **70.1** | **67.4** | ***96%*** | **186.7** | **140.9** | ***75%*** | **364.9** | **82.6** | ***23%*** | **1000.7** | **669.8** | ***67%*** |

Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

**RJL In-line with WNA Reference Scenario**. Plotting our forecast against WNA's three scenarios – reference, upper and lower – shows RJL estimates are slightly more conservative than WNA through 2025, after which we are higher on more aggressive expectations for China and India and large existing producers France (we see reduction reliance as being more protracted) and Russia (replacement of aging fleet likely to be faster than WNA's conservative projections).

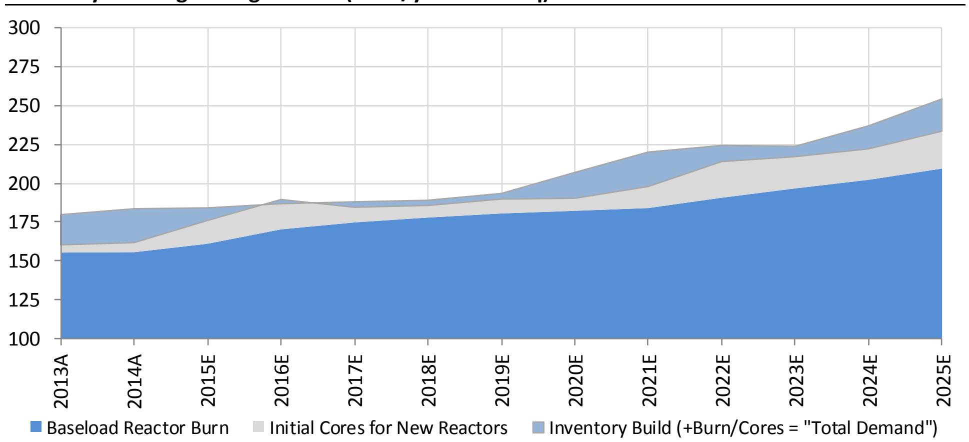
**Exhibit 7: Revised RJL Operating Nuclear Capacity Forecast vs. WNA's Latest Reference, Upper and Lower Scenarios through 2030E (GW Net; End of Period)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

**Uranium Demand for Burn, New Cores Rises Steadily**. Our nuclear reactor model drives uranium requirement forecasts below, with demand divided into three categories: baseload burn, the amount of uranium needed to keep the global fleet running on a steady-state basis; initial cores, the larger 'first charge' needed for new units; and inventory building, which is needed to maintain utility-held stocks at the desired number of years of forward-requirements. Inventory building occurs in waves, in advance of global reactor grid connections.

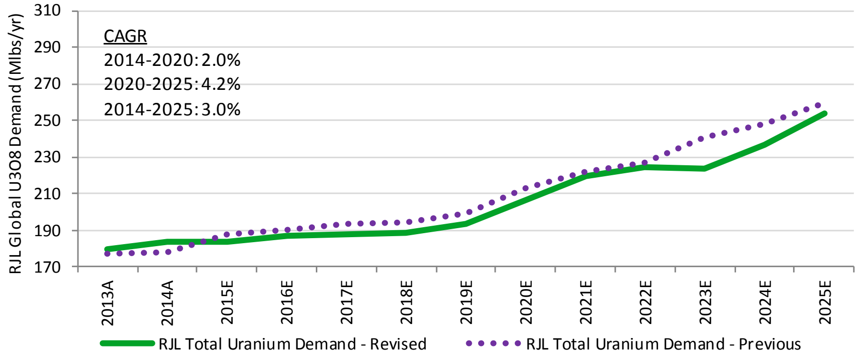
**Exhibit 8: Revised RJL Uranium Demand Forecast for Annual Reactor Burn, Initial Cores and Inventory Building through 2025E (Mlbs/year U3O8eq)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

Requirements have dropped slightly over the period of analysis, most precipitously in the early-2020s on inventory build timing. The curve still considers over 2% growth through 2020, rising to over 4% growth 2020–2025, on greater needs in China, India, Russia and the Middle East.

**Exhibit 9: Revised vs. Previous RJL Total Uranium Demand Forecast through 2025E (Mlbs/year U3O8eq)**




**Changes to RJL Total Uranium Demand Forecast (Mlbs/yr)**

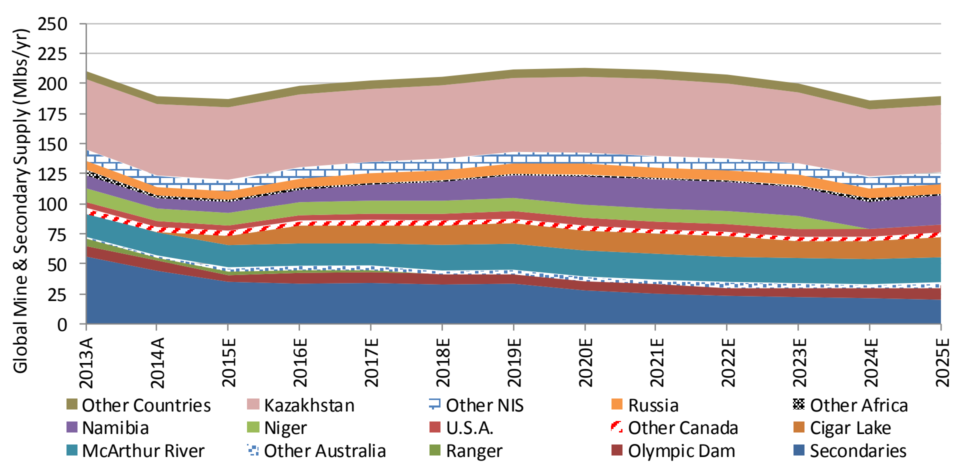
| | 2013A | 2014A | 2015E |
|---|---|---|---|
| Revised Total Demand | 180 | 184 | 184 |
| Previous Total Demand | 177 | 178 | 188 |
| *% Chg (Revised/Prev.)* | 1.3% | 2.9% | -2.0% |

| | 2016E | 2020E | 2025E |
|---|---|---|---|
| Revised Total Demand | 187 | 207 | 254 |
| Previous Total Demand | 190 | 213 | 259 |
| *% Chg (Revised/Prev.)* | -1.7% | -3.0% | -1.9% |

Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

Our global supply forecasts are slightly tweaked but the takeaway is broadly the same as we have previously forecasted – mines and secondary sources are in aggregate expected to exhibit mostly flat growth over the next decade. This of course assumes prices stay below US$50/lb. The only two major areas of development are Cigar Lake, which is running well today and appears on-track to hit full 18 Mlbs/year run-rates during 2017E, and Husab, which will probably start production later in 2016 and features a nameplate capacity of 15 Mlbs/year (we model 12 Mlbs/year).

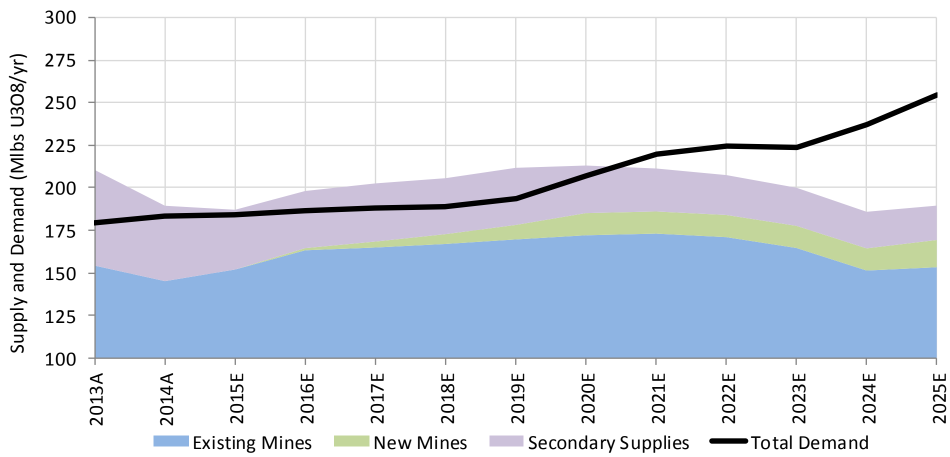
**Exhibit 10: Revised RJL Global Supply Forecast by Mine Production Center Plus Secondary Supplies through 2025E (Mlbs/yr U3O8eq)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

Overlaying our global supply curve with total demand, including expected inventory purchases, the market appears tight this year, but as year Cigar and Husab ramp-up, the world is over-supplied until 2020/2021, when demand begins to outstrip supply. The situation quickly escalates to crisis levels: 65 Mlbs deficit in 2025, rising to over 140 Mlbs deficit in 2030 (not shown due to reduced clarity so far out in time).

**Exhibit 11: Revised RJL Global Supply-Demand Balance: Total Demand vs. Total Supply through 2025E (Mlbs/year U3O8eq)**




Source: Raymond James Ltd., WNA, IEA, UxC, NIW, Bloomberg, company reports

**Inventories Mostly Unusable in Today's Form**. It is possible that utility policy changes and inventory draw-down could offset the structural supply gap. Much has been made of above-ground stocks recently, with estimates over 1 Blbs U3O8eq. But an examination of these materials suggests the majority is either strategic – e.g., for government security missions or pounds held by utilities for use within the next two/three years (the global average 'buffer') – or not readily marketable, e.g., highly-enriched, depleted, or contaminated uranium products. The latter pounds would require, on aggregate, billions of dollars to be processed before they could be used in the traditional fuel cycle. The takeaway is that while excess inventories could provide some buffer to a structural deficit, more than half of global utilities hold strategic inventory levels less than 18 months of their forward requirements (per WNA) and other potential sources of draw-down are less available.

**Exhibit 12: RJL Estimate on Global Utility and Supplier/Intermediary-held Uranium Stockpiles at the End of 2014** – excludes government inventories as highlighted in text commentary below

| Global Stockpile (End-2014E) | Mlbs U3O8eq | Confidence Level | Years of RJL Fwd Req'ts | Data Source |
|---|---|---|---|---|
| ***Nuclear Utilities*** | | | | |
| U.S. | 116 | High | 2.5 | U.S. EIA |
| EU | 138 | High | 2.5 | Euratom |
| Japan | 120 | Medium | 14 | Cameco |
| China | 200 | Medium | 7 | Gov't, UxC, WNA |
| Korea & other (ex Russia) | 50 | Medium | 1 | UxC & RJL |
| | 624 | | 3.4 | |
| ***Suppliers, Intermediaries & Financials*** | | | | |
| U.S. | 19 | Medium | | UxC |
| International | 20 | Medium | | UxC |
| Uranium Participation | 15 | High | | Company filings |
| | 53 | | | |

Source: Raymond James Ltd., WNA, US EIA, UxC, Euratom, NIW, Bloomberg, company reports

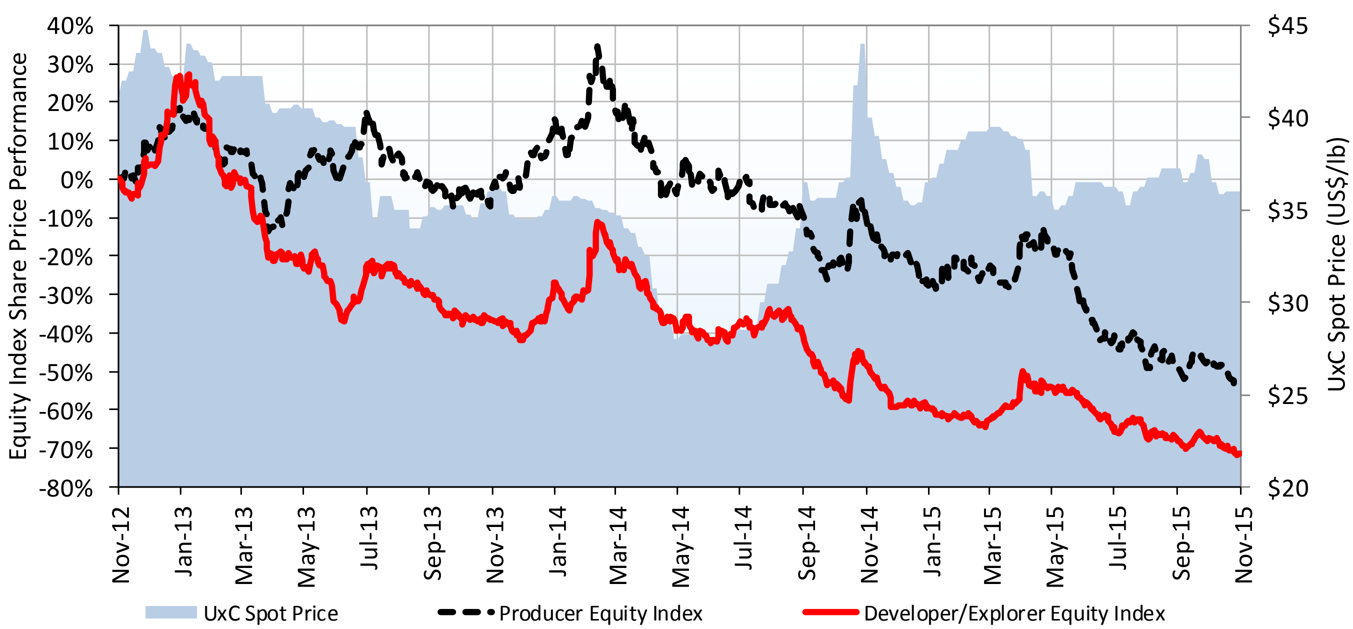
**Much Uncertainty Surrounds Russian Stocks**. The table above excludes government stockpiles, on which there are varying degrees of certainty. For example, based on the US DOE's latest Excess Inventory Management Plan and net of known dispositions since, we estimate just over 100 Mlbs U3O8eq. Of this amount, 68 Mlbs is 'high-assay tails' requiring enrichment to be increased to natural uranium levels of U235 (let alone to reactor grade levels) and 9 Mlbs is HEU, which must be down-blended. In Russia, the picture is much less clear, though there are certainly vast uranium stocks in a wide variety of forms that are either readily-useable in the 'vanilla' Russian fuel cycle or that need decontamination, blending or significant enrichment to be of use. We believe this is the biggest 'black box' in the world of uranium. But what is increasingly clear is that Russia is drawing significant amounts of material from non-secondary sources to feed its domestic fleet and foreign newbuild programs, with the prime examples being 100%-owned Uranium One (and its six Kazakh mines), plus the large Priargunsky conventional mine and the Dalur and Khiagda ISR mines in the motherland. We assume that while Rosatom would probably prefer to preserve much of its existing above-ground stocks for strategic/military purposes (particularly any HEU), it could draw upon those secondary supplies to close any gap between what it is able to mine and what is needed for the reactor fleet.

## Changes to Target Valuations on Covered Uranium Equities

**Investors Fatigued by Dragging Contrarian Thesis**. We are revising many of our target prices to reflect on-going downward pressure on uranium equity share price levels, which we attribute to fatigue amongst contrarian investors who have waited a very long time for the thesis of rising uranium prices to play out. Indeed, it has now been ~57 months since the Fukushima accident and consumption is still below pre-accident levels and inventories are higher. We had expected Japan to have restarted its fleet more quickly and for secondary sources (particularly underfeeding) to have been less significant in the wake of the accident. Accordingly, non-discretionary buying has been sluggish – particularly in the contract market – and prices, though off their bottom of summer 2014, have not yet recovered to anything close to a healthy/equilibrium level.

**Market Multiples Compressed**. The future remains very bright on the supply-demand fundamentals and economics of new supply as highlighted above, though today, the market is not willing to pay for in-ground resources and as we have seen in other metals, is focused on free cash flow (something that at the moment only Cameco can provide). Discovery, can still generate excitement, but even that enthusiasm has been muted relative to levels of just two years ago. The charts below depict this erosion in share value – the majority of our covered companies have added to their asset bases, supporting NAV, but the multiples the market is willing to pay for these assets has declined precipitously.

**Exhibit 13: 3-Year Performance of Spot Uranium Prices, and Producer and Junior Uranium Equities**

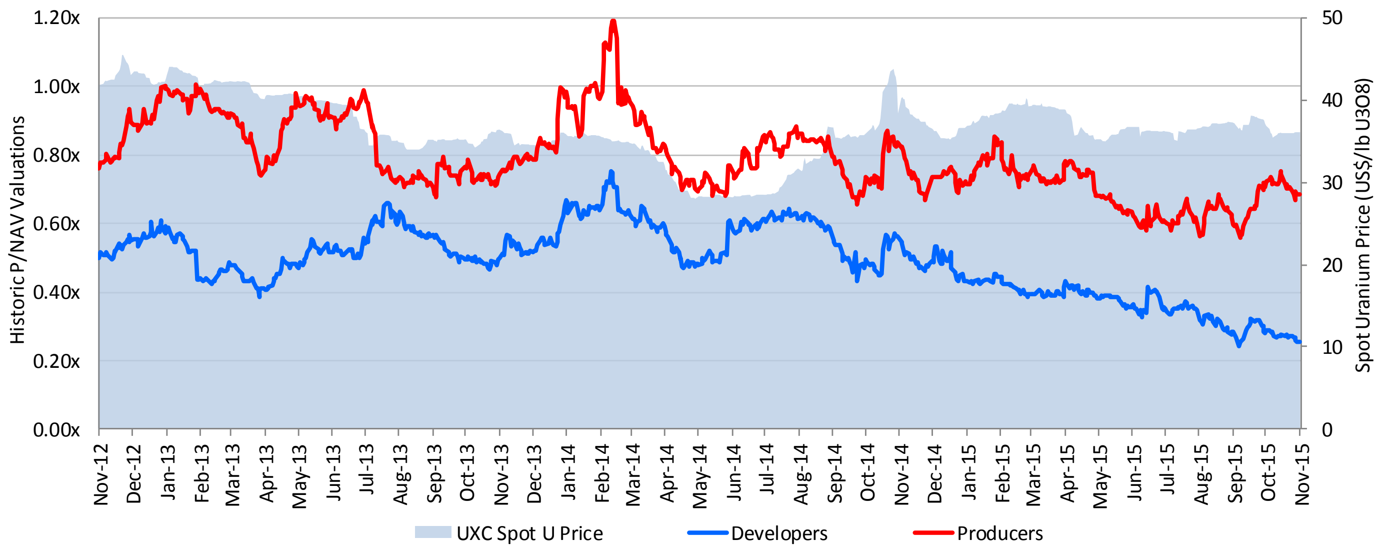



Source: Raymond James Ltd., Capital IQ, UxC



RAYMOND JAMES®

**Exhibit 14: 3-Year RJL Price to NAV Trading Multiples for Producers and Developers of Covered Uranium Equities**




Source: Raymond James Ltd., Capital IQ, UxC

**Fatigue Has Created Excellent Entry Points**. We believe the fatigue provides long-term investors with an excellent opportunity today to build positions in the best uranium equities for exposure to a rebound in uranium prices – a rebound that we expect to play out over the 2016–2018 timeframe. With this fundamentally positive outlook, it is to us unfair to characterize the square as a value trap.

**Exhibit 15: Summary Changes to RJL Target Valuation for Covered Uranium Equities** – target P/NAV reflects the multiple being ascribed to assets valued by DCF; amongst juniors, early stage explorers such as DML and KIV are valued predominantly on in-situ resource ($/lb) metrics, whereas FCU's Triple R & UEX' Hidden Bay are valued on a combination of P/NPV and in-situ multiples.

| | | | | | | | Target Metrics | | | Current Metrics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker | Company | Price | | Rating | Target | Return | Weighting | P/NAV | NAVPS | P/NAV | P/CF '16E |
| ***Producers*** | | | | | | | | | | | |
| CCO | Cameco | 15.99 | New | Outperform 2 | 25.00 | 56% | 50% | 1.2x | 20.75 | 0.8x | 8.8x |
| | | | Old | Outperform 2 | 27.00 | 69% | 50% | 1.3x | 20.62 | 0.8x | 7.9x |
| PDN | Paladin | 0.22 | New | Market Perform 3 | 0.30 | 40% | 100% | 1.2x | 0.26 | 0.8x | nm |
| | | | Old | Market Perform 3 | 0.30 | 40% | 100% | 1.2x | 0.25 | 0.9x | nm |
| URE | Ur-Energy | 0.63 | New | Outperform 2 | 1.70 | 170% | 100% | 0.9x | 1.89 | 0.3x | 10.3x |
| | | | Old | Outperform 2 | 1.80 | 186% | 100% | 0.9x | 1.97 | 0.3x | 9.4x |
| ***Juniors*** | | | | | | | | | | | |
| DML | Denison | 0.49 | New | Outperform 2 | 1.50 | 206% | 100% | 1.0x | 1.56 | 0.3x | nm |
| | | | Old | Outperform 2 | 1.80 | 267% | 100% | 1.0x | 1.88 | 0.3x | nm |
| FCU | Fission | 0.57 | New | Outperform 2 | 1.50 | 163% | 100% | 0.7x | 2.19 | 0.3x | nm |
| | | | Old | Outperform 2 | 1.30 | 128% | 100% | 0.5x | 2.63 | 0.2x | nm |
| KIV | Kivalliq | 0.08 | New | Market Perform 3 | 0.20 | 150% | 100% | 1.0x | 0.19 | 0.4x | nm |
| | | | Old | Market Perform 3 | 0.25 | 213% | 100% | 1.0x | 0.27 | 0.3x | nm |
| UEX | UEX | 0.12 | New | Outperform 2 | 0.40 | 248% | 100% | 0.6x | 0.67 | 0.2x | nm |
| | | | Old | Outperform 2 | 0.50 | 335% | 100% | 0.7x | 0.71 | 0.2x | nm |
| U | Uranium Participation | 5.20 | New | Outperform 2 | 6.25 | 20% | 100% | 1.0x | 6.25 | 0.8x* | nm |
| | | | Old | Outperform 2 | 6.25 | 20% | 100% | 1.0x | 6.25 | 0.8x* | nm |

*Note: Our current P/NAV for U is calculated using our current NAVPS of C$6.21 not our target NAVPS of C$6.25
Source: Raymond James Ltd.

**Specific Valuation Revisions and Near-term Catalysts**

*Producers*

- Cameco – Outperform, $25.00 target – We are revising downwards our target P/NAV to 1.2x (from 1.3x) and P/CF to 11x (from 14x; albeit, this is now applied to 2017E CFPS of C$2.28, from C$1.81 in 2016E). The industry bellwether reported 3Q15 financial and operating results on Friday Oct-30, with EPS of C$0.20/share, in-line with our forecasts but missing consensus estimates of C$0.30/share on higher COGS. 4Q15 is shaping up to be a much stronger quarter with 10–12 Mlbs uranium sales at lower costs. 2016, also, should be a more positive year as Cigar ramps-up further and FCF totals over C$400 mln (RJL estimate). The CRA dispute will continue to provide an overhang until it is resolved, either by court ruling (guidance is a Tax Court outcome between 4Q17–4Q18) or as a settlement out of court.

- Paladin – Market Perform, $0.30 target – Already quite conservative on in-situ valuation, we have kept our multiples unchanged. F1Q16 financial results were slightly better than our estimates. As expected, cash costs of US$28/lb were marginally higher q/q due to lower sales volumes, but partially offset by further BRP efficiencies. F2016 guidance was maintained with production of 5.0–5.4 Mlbs at an average sales price premium of US$4/lb over spot and C1 cash cost of US$25–US$27/lb (US$39–US$41/lb all-in costs). For F2Q16E, sales and costs are expected to normalize with sales of 1.5–1.7 Mlbs at US$25–US$27/lb cash costs, boosting cash from US$108 mln to US$110–US$120 mln (excluding a US$28 mln receipt for a delivery at CYE). Strategic initiatives are still being evaluated to refinance or repay its US$274 mln convertible bonds (maturing April 2017).

- Ur-Energy – Outperform, $1.70 target – Our target P/NAV of 0.9x is unchanged as we believe a significant discount is unjustified, but our slightly lower uranium price deck reduces our target to $1.70. Lost Creek again returned outstanding operating costs for 3Q15, coming in at US$15.19/lb, with financial results reported Oct-30. Coupled with realized prices of US$56.39/lb, operating margins were strong. We believe 4Q15 will be a bit weaker on sales, but 2016 should be solid, particularly if spot prices improve, providing a second economic avenue into which the company can sell uncommitted production. An updated PEA on the mine, which should include a larger mineral inventory, is due in 4Q15E.

*Junior Exploration and Development*

- Denison – Outperform, $1.50 target – Our in-situ multiple is now US$3.5–US$4.0/lb (from a range of US$4.0–US$5.0/lb) for high-grade Canadian resources and we have trimmed non-core international assets. A maiden resource estimate on the Gryphon zone, located 3 km north of 71 Mlbs Phoenix, returned 43.0 Mlbs grading 2.3% $U_3O_8$. The resource pushes total Wheeler River property pounds to 114 Mlbs at 5.1% ranking it as the largest and highest-grade undeveloped asset in the Athabasca Basin. An initial PEA considering a combined Phoenix/Gryphon underground development plan is likely sometime in 2Q16E. We also anticipate an update on the pending sale of the company's Mongolian assets to Uranium Industry before year-end 2015E.

- Fission – Outperform, $1.50 target – Our in-situ multiple is now US$4.0/lb (from US$5.0/lb) applied to target resources of 150 Mlbs at Triple R. Recall, our PLS valuation is based on a 50/50 weighting of this in-situ value and our DCF(8%) model, to which we apply a 0.5x P/NPV multiple to reflect the project's early-stage; our previous target price ($1.30/share) reflected the share ratio of the proposed, but ultimately unsuccessful, merger with Denison. We expect drilling to resume in early January, as well as an update to the Sep-2015 PEA in 3Q15 that should include the quickly-growing on-land R600W Zone.

- Kivalliq – Market Perform, $0.20 target – Our in-situ multiple for current resources at Angilak of 43 Mlbs is now US$0.75/lb (from US$0.90/lb), plus US$0.20/lb (from US$0.50/lb) for 22 Mlbs in notional upside (albeit, we see long-term potential of over 100 Mlbs on the property). Last month, the company returned strong preliminary drill results from the Dipole discovery at Angilak and encouraging surface and geophysical results at Hatchet, SK – both projects should see ground work and drilling next summer.

- NexGen – We are research restricted.
- UEX – Outperform, $0.40 target – Incorporation of value for the recently announced option to earn-in at Christie Lake – a highly prospective project on-trend with and near McArthur River – slightly offsets a trim to in-situ multiples for Hidden Bay's resource upside (US$0.25/lb on 10 Mlbs incremental growth), Shea Creek existing resources (US$0.75/lb on 96 Mlbs) and growth potential (US$0.25/lb on 25 Mlbs). Recall, we also model Hidden Bay's existing resources via DCF, to which we apply a 0.4x P/NPV multiple. We look forward to initial drilling by UEX at Christie, plus further ground work and drilling at Shea and Hidden Bay, in early 2016. Yesterday, UEX/AREVA released exploration budget guidance for 2016 of $2.2 mln, comprising $1.35 mln at Shea Creek, the only WAJV project in which UEX has elected to participate in (UEX share: $0.7 mln). Work at Shea Creek this year consisted of 12 drill holes (8,185 m) which discovered no new mineralization but returned strong hydrothermal (in sandstone and basement rocks) and anomalous uranium geochemistry from five directional offcuts starting from hole SHE-127.

*Physical Fund*

- Uranium Participation – Outperform, $6.25 target – The world's only physically-backed uranium fund is now trading at a 17% discount to NAV. We continue to use our forward-looking uranium price deck to drive our 6–12 month share price target, and our valuation is based on a spot price of US$42/lb in 2Q16E/3Q16E, up from US$36/lb today. In this kind of moderately rising uranium price environment, it is conceivable that the stock will continue to trade at a discount to its NAV and accordingly, we ascribe a 10% discount to our assumed uranium price to drive our C$6.25/share target. However, as uranium prices begin to move upwards more quickly, we highlight the potential for both the NAV to increase, as well as for the discount to close and a premium to emerge, as we have seen numerous times in the past.

## Uranium

### Cameco Corp. CCO-TSX

| **Rating:** Outperform | | **Suitability:** High Risk/Growth | | |
|---|---|---|---|---|
| Current Price (Nov-23-15) | C$15.99 | Target Price (6-12 mos) | Old: C$27.00 | New: C$25.00 |
| 52-Week Range | C$21.98 - C$15.50 | Total Return to Target | | 56% |
| Market Capitalization (mln) | C$6,329 | Dividend/Yield | | C$0.40/2.5% |
| Shares Outstanding (mln, basic) | 395.8 | Current Net Debt (mln) | | C$1,757 |
| 10 Day Avg Daily Volume (000s) | 969 | Enterprise Value (mln) | | C$8,086 |
| Total Resource (Mlbs) | 1,128.60 | | | |
| Shares Outstanding (mln, f.d.) | 402.0 | | | |

| **Cash Flow/Share** | | 1Q Mar | 2Q Jun | 3Q Sep | 4Q Dec | Full Year | **Revenue (mln)** | **NAVPS** | **P/CFPS** | **P/NAV** |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2014A | C$(0.06) | C$0.17 | C$0.55 | C$0.82 | C$1.48 | C$2,398 | | 10.8x | |
| Old | 2015E | 0.04A | 0.27A | 0.34A | 0.53 | 1.19 | 2,668 | 20.62 | | |
| **New** | **2015E** | **0.04A** | **0.27A** | **0.34A** | **0.54** | **1.19** | **2,661** | **20.75** | **13.5x** | **0.8x** |
| Old | 2016E | 0.47 | 0.44 | 0.46 | 0.65 | 2.02 | 3,036 | NA | | |
| **New** | **2016E** | **0.40** | **0.38** | **0.46** | **0.57** | **1.81** | **2,899** | **NA** | **8.8x** | **NA** |

| | | **EPS** | **Working Capital (mln)** | **Capex (mln)** | **Uranium Price (US$/lb)** | **Production (Mlbs)** | **Unit Costs (C$/lb; incl D&A)** |
|---|---|---|---|---|---|---|---|
| | 2014A | C$1.09 | C$1,551.9 | C$(480.1) | US$33.00 | 23.3 | C$34.6 |
| Old | 2015E | 0.92 | 1,414.2 | (385.0) | 38.00 | 27.4 | 39.3 |
| **New** | **2015E** | **0.93** | **1,415.8** | **(385.0)** | **37.00** | **27.4** | **39.2** |
| Old | 2016E | 1.66 | 1,554.6 | (388.4) | 45.00 | 28.8 | 40.6 |
| **New** | **2016E** | **1.43** | **1,472.7** | **(388.4)** | **42.00** | **28.8** | **39.8** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One

### Denison Mines Corp. DML-TSX

| **Rating:** Outperform | | **Suitability:** High Risk/Speculation | | |
|---|---|---|---|---|
| Current Price (Nov-23-15) | C$0.49 | Target Price (6-12 mos) | Old: C$1.80 | New: C$1.50 |
| 52-Week Range | C$1.29 - C$0.48 | Total Return to Target | | 206% |
| Market Capitalization (mln) | C$254 | Dividend/Yield | | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 518.4 | Current Net Debt (mln) | | -US$9 |
| 10 Day Avg Daily Volume (000s) | 224 | Enterprise Value (mln) | | C$243 |
| Total Resource (Mlbs) | 373.50 | | | |
| Shares Outstanding (mln, f.d.) | 524.6 | | | |

| **EPS** | | 1Q Mar | 2Q Jun | 3Q Sep | 4Q Dec | Full Year | **Revenue (mln)** | **NAVPS** | **P/E** | **P/NAV** |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2014A | US$(0.02) | US$(0.01) | US$(0.01) | US$(0.01) | US$(0.05) | US$10 | | nm | |
| Old | 2015E | (0.02)A | (0.01)A | (0.01) | 0.02 | (0.02) | 10 | 1.88 | | |
| **New** | **2015E** | **(0.02)A** | **(0.01)A** | **(0.04)A** | **(0.01)** | **(0.07)** | **10** | **1.56** | **nm** | **0.3x** |
| Old | 2016E | (0.01) | (0.01) | (0.01) | (0.01) | (0.03) | 13 | NA | | |
| **New** | **2016E** | **0.00** | **(0.01)** | **(0.01)** | **(0.01)** | **(0.02)** | **13** | **NA** | **nm** | **NA** |

| | | **CFPS** | **Working Capital (mln)** | **Exploration Expense** | **Uranium Price (US$/lb)** | **Production (Mlbs)** | **Cash Costs (US$/lb)** |
|---|---|---|---|---|---|---|---|
| | 2014A | US$(0.05) | US$22.5 | C$(14.8) | US$33.00 | 0.1 | US$6.0 |
| Old | 2015E | (0.03) | 28.5 | (16.3) | 38.00 | 0.0 | 33.0 |
| **New** | **2015E** | **(0.03)** | **7.7** | **(16.6)** | **37.00** | **0.0** | **33.0** |
| Old | 2016E | (0.03) | 15.1 | (14.5) | 45.00 | 0.0 | 0.0 |
| **New** | **2016E** | **(0.02)** | **6.1** | **(14.5)** | **42.00** | **0.0** | **0.0** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One

## Uranium

### Fission Uranium Corp. FCU-TSX

| | | | |
|---|---|---|---|
| **Rating:** Outperform | | **Suitability:** High Risk/Speculation | |
| Current Price (Nov-23-15) | C$0.57 | Target Price (6-12 mos) | Old: C$1.30 New: C$1.50 |
| 52-Week Range | C$1.38 - C$0.57 | Total Return to Target | 163% |
| Market Capitalization (mln) | C$220 | Dividend/Yield | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 386.2 | Current Net Debt (mln) | -C$10 |
| 10 Day Avg Daily Volume (000s) | 589 | Enterprise Value (mln) | C$210 |
| Shares Outstanding (mln, f.d.) | 413.7 | | |
| Attributable RJL Target Resource (Mlbs | 150.0 | | |

| EPS | | 1Q Sep | 2Q Dec | 3Q Mar | 4Q Jun | Full Year | Revenues (mln) | NAV | P/E | P/NAV |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2015A | C$(0.01) | C$(0.01) | C$0.00 | C$(0.01) | C$(0.03) | C$0 | | NM | |
| Old | 2016E | (0.01) | (0.01) | (0.01) | (0.01) | (0.03) | 0 | NA | | |
| **New** | **2016E** | **(0.01)A** | **(0.01)** | **(0.01)** | **(0.01)** | **(0.03)** | **0** | **2.19** | **NM** | **0.3x** |
| Old | 2017E | NA | NA | NA | NA | NA | NA | NA | | |
| **New** | **2017E** | **(0.01)** | **(0.01)** | **(0.01)** | **(0.01)** | **(0.03)** | **0** | **NA** | **NM** | **NA** |

| | | CFPS | Cash & Equivalents (C$ mln) | Uranium Price (US$/lb) | Exploration Expense (C$ mln) | Total Debt (C$ mln) | Production (Mlbs U3O8) |
|---|---|---|---|---|---|---|---|
| | 2015A | C$(0.02) | C$24.80 | US$37.00 | C$(33.4) | C$0.0 | 0.0 |
| Old | 2016E | (0.02) | 10.00 | 45.00 | (27.4) | 0.0 | 0.0 |
| **New** | **2016E** | **(0.02)** | **10.00** | **42.00** | **(29.2)** | **0.0** | **0.0** |
| Old | 2017E | NA | NA | NA | NA | NA | NA |
| **New** | **2017E** | **(0.02)** | **10.00** | **50.00** | **(29.2)** | **0.0** | **0.0** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One. All metrics reflect fiscal year end of June 30, except uranium price which reflects calendar year.

### Kivalliq Energy Corp. KIV-TSXV

| | | | |
|---|---|---|---|
| **Rating:** Market Perform | | **Suitability:** High Risk/Speculation | |
| Current Price (Nov-23-15) | C$0.08 | Target Price (6-12 mos) | Old: C$0.25 New: C$0.20 |
| 52-Week Range | C$0.21 - C$0.06 | Total Return to Target | 150% |
| Market Capitalization (mln) | C$17 | Dividend/Yield | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 216.8 | Current Net Debt (mln) | -C$1 |
| 10 Day Avg Daily Volume (000s) | 72 | Enterprise Value (mln) | C$17 |
| Shares Outstanding (mln, f.d.) | 238.4 | | |
| Total Resource (Mlbs u308) | 43.3 | | |

| EPS | | 1Q Dec | 2Q Mar | 3Q Jun | 4Q Sep | Full Year | Revenues (mln) | NAVPS | P/E | P/NAV |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2014A | C$0.00 | nm | nm | nm | C$(0.01) | C$0 | | nm | |
| Old | 2015E | 0.00 | nm | nm | nm | (0.01) | 0 | 0.27 | | |
| **New** | **2015E** | **0.00** | **nm** | **nm** | **nm** | **(0.01)** | **0** | **0.19** | **nm** | **0.4x** |
| Old | 2016E | nm | nm | nm | nm | (0.01) | 0 | NA | | |
| **New** | **2016E** | **nm** | **nm** | **nm** | **nm** | **(0.01)** | **0** | **NA** | **nm** | **NA** |

| | | CFPS | Working Capital (mln) | Exploration Expense | Uranium Price (US$/lb) | Production (Mlbs U308) | Cash Costs (US$/lb U308) |
|---|---|---|---|---|---|---|---|
| | 2014A | C$(0.01) | C$1.60 | C$(1.4) | US$33.00 | 0.00 | US$0.00 |
| Old | 2015E | (0.01) | 0.40 | (2.0) | 38.00 | 0.00 | 0.00 |
| **New** | **2015E** | **(0.01)** | **0.40** | **(2.0)** | **37.00** | **0.00** | **0.00** |
| Old | 2016E | (0.01) | 0.30 | 0.0 | 45.00 | 0.00 | 0.00 |
| **New** | **2016E** | **(0.01)** | **0.30** | **0.0** | **42.00** | **0.00** | **0.00** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One. All metrics reflect fiscal year end of September 30, except uranium price which reflects calendar year.

## Uranium

### Paladin Energy Ltd. PDN-TSX

| **Rating:** Market Perform | | **Suitability:** High Risk/Growth | |
|---|---|---|---|
| Current Price (Nov-23-15) | C$0.22 | Target Price (6-12 mos) | C$0.30 |
| 52-Week Range | C$0.41 - C$0.15 | Total Return to Target | 40% |
| Market Capitalization (mln) | C$368 | Dividend/Yield | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 1,712.1 | Current Net Debt (mln) | US$360 |
| 10 Day Avg Daily Volume (000s) | 271 | Enterprise Value (mln) | C$850 |
| Total Resource (Mlbs) | 488.20 | | |
| Shares Outstanding (mln, f.d.) | 1,712.1 | | |

| **EPS** | | 1Q Sep | 2Q Dec | 3Q Mar | 4Q Jun | Full Year | **Revenue (mln)** | **NAVPS** | **P/E** | **P/NAV** |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2015A | US$(0.02) | US$(0.02) | US$(0.01) | US$0.01 | US$(0.05) | US$200 | | nm | |
| Old | 2016E | (0.02) | 0.00 | 0.00 | 0.00 | (0.02) | 222 | 0.25 | | |
| **New** | **2016E** | **(0.01)A** | **(0.01)** | **(0.01)** | **(0.01)** | **(0.02)** | **207** | **0.26** | **nm** | **0.8x** |
| Old | 2017E | 0.00 | 0.00 | 0.00 | 0.00 | (0.01) | 289 | NA | | |
| **New** | **2017E** | **0.00** | **0.00** | **0.00** | **0.00** | **(0.01)** | **272** | **NA** | **nm** | **NA** |

| | | **Uranium Price (US$/lb)** | **Working Capital (mln)** | **Capex (mln)** | **Long Term Debt (mln)** | **Production (Mlbs)** | **Cash Costs (US$/lb)** |
|---|---|---|---|---|---|---|---|
| | 2015A | US$35.65 | US$240.3 | US$(11.5) | US$534.5 | 5.0 | US$29.1 |
| Old | 2016E | 41.40 | 182.4 | (18.5) | 505.6 | 4.9 | 27.1 |
| **New** | **2016E** | **39.50** | **174.9** | **(14.8)** | **511.3** | **4.9** | **27.1** |
| Old | 2017E | 48.50 | 76.6 | (18.5) | 242.7 | 4.9 | 28.8 |
| **New** | **2017E** | **46.00** | **117.9** | **(18.5)** | **248.4** | **4.9** | **28.8** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating. Source: Raymond James Ltd., Thomson One. All metrics reflect fiscal year end of June 30.

## Uranium

### UEX Corp. UEX-TSX

| **Rating:** Outperform | | **Suitability:** High Risk/Speculation | | |
|---|---|---|---|---|
| Current Price (Nov-23-15) | C$0.12 | Target Price (6-12 mos) | Old: C$0.50 | New: C$0.40 |
| 52-Week Range | C$0.35 - C$0.11 | Total Return to Target | | 248% |
| Market Capitalization (mln) | C$30 | Dividend/Yield | | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 246.0 | Current Net Debt (mln) | | -C$5 |
| 10 Day Avg Daily Volume (000s) | 213 | Enterprise Value (mln) | | C$25 |
| Total Resource (Mlbs u308) | 100.9 | | | |
| Shares Outstanding (mln, f.d.) | 251.7 | | | |

| EPS | | 1Q Mar | 2Q Jun | 3Q Sep | 4Q Dec | Full Year | Revenues (mln) | NAVPS | P/E | P/NAV |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2014A | C$0.00 | C$(0.04) | C$0.00 | C$0.00 | C$(0.04) | C$0 | | nm | |
| Old | 2015E | 0.00 | 0.00 | 0.00 | 0.00 | (0.01) | 0 | 0.71 | | |
| **New** | **2015E** | **0.00** | **0.00** | **0.00** | **0.00** | **(0.01)** | **0** | **0.67** | **nm** | **0.2x** |
| Old | 2016E | 0.00 | 0.00 | 0.00 | 0.00 | (0.01) | 0 | NA | | |
| **New** | **2016E** | **0.00** | **0.00** | **0.00** | **0.00** | **(0.01)** | **0** | **NA** | **nm** | **NA** |

| | | CFPS | Working Capital (mln) | Exploration Expense | Uranium Price (US$/lb) | Production (Mlbs U308) | Cash Costs (US$/lb U308) |
|---|---|---|---|---|---|---|---|
| | 2014A | C$(0.01) | C$8.2 | C$(1.4) | US$33.00 | 0.00 | 0.00 |
| Old | 2015E | (0.01) | 3.8 | (5.0) | 38.00 | 0.00 | 0.00 |
| **New** | **2015E** | **(0.01)** | **3.9** | **(5.0)** | **37.00** | **0.00** | **0.00** |
| Old | 2016E | (0.01) | (0.3) | (5.0) | 45.00 | 0.00 | 0.00 |
| **New** | **2016E** | **(0.01)** | **(0.2)** | **(5.0)** | **42.00** | **0.00** | **0.00** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One

### Ur-Energy Inc. URE-TSX

| **Rating:** Outperform | | **Suitability:** High Risk/Speculation | | |
|---|---|---|---|---|
| Current Price (Nov-23-15) | C$0.63 | Target Price (6-12 mos) | Old: C$1.80 | New: C$1.70 |
| 52-Week Range | C$1.35 - C$0.60 | Total Return to Target | | 170% |
| Market Capitalization (mln) | C$82 | Dividend/Yield | | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 130.2 | Current Net Debt (mln) | | US$24 |
| 10 Day Avg Daily Volume (000s) | 33 | Enterprise Value (mln) | | C$114 |
| Total Resource (Mlbs) | 69.80 | | | |
| Shares Outstanding (mln, f.d.) | 146.1 | | | |

| EPS | | 1Q Mar | 2Q Jun | 3Q Sep | 4Q Dec | Full Year | Revenue (mln) | NAVPS | P/E | P/NAV |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2014A | US$(0.01) | US$(0.01) | US$(0.03) | US$(0.02) | US$(0.07) | C$29 | | nm | |
| Old | 2015E | (0.01)A | 0.01A | 0.00A | (0.02) | (0.03) | 39 | 1.97 | | |
| **New** | **2015E** | **(0.01)A** | **0.01A** | **0.00A** | **(0.02)** | **(0.03)** | **39** | **1.89** | **nm** | **0.3x** |
| Old | 2016E | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 39 | NA | | |
| **New** | **2016E** | **0.00** | **0.00** | **0.00** | **0.01** | **0.00** | **38** | **NA** | **nm** | **NA** |

| | | Uranium Price (US$/lb) | Working Capital (mln) | Capex (mln) | Long Term Debt (mln) | Production (Mlbs) | Cash Costs (US$/lb) |
|---|---|---|---|---|---|---|---|
| | 2014A | US$33.00 | US$(2.6) | US$(0.4) | US$40.6 | 0.6 | US$24.2 |
| Old | 2015E | 38.00 | (6.7) | 0.0 | 24.2 | 0.8 | 19.6 |
| **New** | **2015E** | **37.00** | **(7.0)** | **0.0** | **24.2** | **0.8** | **19.6** |
| Old | 2016E | 45.00 | (4.7) | (10.0) | 15.5 | 0.8 | 18.9 |
| **New** | **2016E** | **42.00** | **(4.7)** | **(10.0)** | **15.5** | **0.8** | **18.8** |

Raymond James has updated its suitability rating system, effective 9/29/15. Please see the disclosures for the definition of the suitability rating.
Source: Raymond James Ltd., Thomson One

## Uranium

### Uranium Participation Corporation U-TSX

| | | | |
|---|---|---|---|
| **Rating:** Outperform | | **Suitability:** High Risk/Growth | |
| Current Price (Nov-23-15) | C$5.20 | Target Price (6-12 mos) | C$6.25 |
| 52-Week Range | C$5.69 - C$4.82 | Total Return to Target | 21% |
| Market Capitalization (mln) | C$598 | Dividend/Yield | C$0.00/0.0% |
| Shares Outstanding (mln, basic) | 115.6 | Current Net Debt (mln) | -C$14 |
| 10 Day Avg Daily Volume (000s) | 152 | Enterprise Value (mln) | C$584 |
| Valuation (US$/lb) | 29.71 | | |
| Shares Outstanding (mln, f.d.) | 115.6 | | |

| EPS | | 1Q May | 2Q Aug | 3Q Nov | 4Q Feb | Full Year | Revenue (mln) | NAVPS | P/E | P/NAV |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2015A | C$(1.04) | C$0.33 | C$1.52 | C$0.30 | C$1.10 | C$1 | | 4.7x | |
| Old | 2016E | (0.59)A | 0.07 | 0.20 | 0.23 | (0.09) | 1 | 5.95 | | |
| **New** | **2016E** | **(0.59)A** | **0.57A** | **0.30** | **0.38** | **0.67** | **1** | **6.30** | **7.7x** | **0.8x** |
| Old | 2017E | 0.23 | 0.19 | 0.26 | 0.26 | 0.94 | 1 | NA | | |
| **New** | **2017E** | **0.24** | **0.20** | **0.27** | **0.27** | **0.99** | **1** | **NA** | **0.0x** | **NA** |

| | | CFPS | Working Capital (mln) | Capex (mln) | Long Term Debt (mln) | U3O8e Inventory (Mlbs) | Uranium Price (US$/lb) |
|---|---|---|---|---|---|---|---|
| | 2015A | C$(0.05) | C$15.7 | C$0.0 | C$0.0 | 15 | US$38.00 |
| Old | 2016E | (0.04) | 10.9 | 0.0 | 0.0 | 15 | 45.00 |
| **New** | **2016E** | **(0.04)** | **11.1** | **0.0** | **0.0** | **15** | **42.00** |
| Old | 2017E | (0.04) | 7.4 | 0.0 | 0.0 | 15 | 52.00 |
| **New** | **2017E** | **(0.04)** | **7.5** | **0.0** | **0.0** | **15** | **52.00** |

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Source: Raymond James Ltd., Thomson One. All metrics reflect fiscal year end of February 28, except uranium price which reflects calendar year.

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