CAPITAL MARKETS
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INDUSTRY REPORT – Uranium

February 11, 2020

Trump Budget Requests US$1.36 Billion for Office of Nuclear Energy

THE U.S. DEPARTMENT OF ENERGY (DOE) HAS RELEASED ITS FY 2021 CONGRESSIONAL BUDGET REQUEST WHICH INCLUDES "A RECORD $1.36 BILLION FOR THE OFFICE OF NUCLEAR ENERGY" (DETAILS HERE). THE REQUEST INCLUDES A $150 MILLION REQUEST ANNUALLY (2021-2030, $1.5 BILLION INDICATED OVER 10 YEARS) TO SET UP A STRATEGIC URANIUM RESERVE TO "PROTECT THE NATION'S ENERGY SECURITY INTERESTS" AND "REESTABLISH THE NATION'S NUCLEAR FUEL SUPPLY CHAIN"

OUR TAKE: The record budget is a decidedly positive nod in favour of any entity controlling U.S. uranium assets/resources and highlights the potential for future positive policy-driven catalysts in the U.S. uranium sector, possibly influenced by the results of the "United States Nuclear Fuel Working Group" report which was likely delivered to the White House in late 2019. Aside from the request to establish a strategic uranium reserve, the budget includes a 43% larger request ($1.2 billion) than last year's for "R&D" and suggests a renewed emphasis on the U.S.'s commitment to its nuclear future, recognizing the "need to bring new reactors to the market." We think it is a good time to add uranium exposure, particularly with U.S. exposure.

KEY HIGHLIGHTS

- **Strategic Uranium Reserve shows Commitment to Nuclear Future:** The budget requests $150 million annually from 2021-2030 (inclusive, <link, pg. 127>) to "set up a uranium reserve to further protect the nation's energy security interests."
    - **The $150M/year ($1.5 billion over 10 years)** is not alone enough to revive the U.S. domestic uranium mining industry in our view, but the request recognizes a broader commitment to revive the domestic industry. We don't know pricing, volume or form of the reserve (U_3O_8, UF_6, EUP, etc.), which will be important in assessing the ultimate impact of the budget. The total budget may relate to several forms of uranium that are higher value that don't translate directly to miners.
    - To put some VERY general context around the numbers, we know $150 million annually to uranium producers would be the equivalent of 3.0 million pounds of uranium as U_3O_8 if you assume a big step up in price to $50/lb (from current spot price of under $25 and current long term price of $32/lb).
    - There is no discussion of per pound pricing or volumes, but higher pricing would be required to incentivize this supply. At these levels (eg. 3.0 Mlb U_3O_8 at $50/lb) would not be enough to support a multi-producer diversified domestic supply without further support in the form of much higher uranium prices, either by market, or by way of U.S. Government incentives for commercial utility uranium supply to the civil nuclear reactor fleet as well in our opinion. **Either way, the U.S. government is making a concerted effort to support domestic uranium, increasing the likelihood that we will see the further support needed for a more robust domestic industry.**

- **U.S. moves to address domestic uranium production in steady decline:** Domestic uranium production in the U.S. has declined by ~90% since peaking in 1980 at ~43M lbs U_3O_8 (source: EIA), and now accounts for ~2% of the country's consumption (estimated 2018), compared to 49% in 1987. The remainder of U.S. uranium requirements are filled by imports from Canada (~25%), Kazakhstan (~24%), Australia (~20%), and Russia (~14%) to support the 97 nuclear reactors that produce 20% of the country's electricity.

- **Uranium market fundamentals starting to align.** Outside the U.S. drivers, we are generally bullish on the uranium sector long-term. Our bullish view continues to be driven by the effect of production cuts from the world's largest suppliers designed to improve the demand-supply balance and increase uranium prices. We believe substantially higher prices will be required to incentivize new mine construction to backfill the accelerating supply shortfall we outline from 2027 (already in deficit). In the near-term, the uranium price impact of supply shortfalls is expected to be moderated by the global inventory surplus accumulated over the last 8 years, but we expect prices to build steadily toward "new supply" incentive prices in coming years. We believe that the uranium equity universe will lead the charge higher in anticipation of higher uranium prices, as the sector offers its most compelling value proposition since pre-Fukushima.

- **The Haywood Uranium Equity Model Portfolio includes our recommended weightings to uranium assets.** Please see our January 2020 sector and model portfolio update for more information. See Page 2 for a review of our 'Top-Picks'.

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For Important Disclosures and Analyst Certification See Page 3
All Prices are in US$ unless noted

Uranium Sector Top Picks

Our best bets for 2020: Our top picks for 2020 include one carry over from last year in NexGen (NXE-T, Rating: Buy, Target: $6.00) and one new addition in Azarga Energy (AZZ-T, Rating: Buy, Target: $0.50). NexGen controls the best uranium discovery made anywhere in the world in decades, in the ultra-high-grade Arrow deposit, while Azarga has made major project level and regulatory progress in 2019 and we expect it can covert this success into share price performance in 2020.

NexGen (NXE-T, Last: $1.43, Rating: BUY, Target: $6.00)

Our Take: NXE remains our top pick in the uranium space due to the disruptive potential of the Arrow deposit, with its massive scale and strong economics. Link to Most Recent Report

- **Top Asset:** We view the Arrow deposit as 'the best undeveloped uranium asset globally and highly strategic'.
- **Take-out Candidate:** We believe that it is critical for existing major producers to control this deposit because of its disruptive potential and that this is their only option to preserve the value of their existing deposits and maintain their ability to affect price with production curtailments.
- **Ultra Low-Cost:** The Arrow PFS suggests cash operating costs of US$4.65/lb vs. a current UxC term price of US$32/lb, implying an industry leading margin for a tier 1 scale operation**.**
- **Catalyst:** Feasibility Study (FS) expected in "mid H1 2020".
- **Cash of $65 million** expected to be sufficient to carry NexGen all the way to a construction decision on Arrow.
- **Current share price represents a great opportunity to accumulate NXE positions as it continues to de-risk the project in 2020.**

Azarga Uranium (AZZ-T, Last: $0.20, Rating: BUY, Target: $0.50)

Our Take: AZZ delivered on many objectives in 2019, hitting some major milestones which de-risked the stock and should convert in share price performance in 2020. Link to Most Recent Report

- **Big Permitting De-risking in 2019:** In mid-December 2019 Azarga announced that the Atomic Safety & Licensing Board (ASLB) had dismissed the final contention related to the NRC License issued for its flagship ISR uranium project, Dewey Burdock, SD, USA. While there remains a period of review of the ASLB decision, we believe the dismissal was a major event and will be very difficult to overturn upon review. We expect the stock to re-base as this fog clears.
- New PEA in 2019 confirmed our thesis regrading Dewey Burdock's potential to evolve into a lower-cost, low CAPEX uranium producing operation in the US. In early December 2019 AZZ published a PEA update showing major improvement over the prior iteration, demonstrating the project's tolerance for lower prices. With strong economics at our uranium price forecast *(After-Tax NPV/IRR @ US$55/lb U_3O_8: US$147.5M / 50%)*, it was also reassuring to see a US$63M $NPV_{8\%}$ / 28% IRR (pre-tax) at US$40/lb. With all-in pre-tax cost of production of US$29/lb, Dewey Burdock should be a very resilient project capable of generating positive cash-flow even at currently depressed long-term market prices.
- **Take-out Candidate:** We believe that with the major permitting/regulatory progress and robust PEA delivered in 2019, Azarga would make a very attractive tuck-in acquisition for any of the U.S. producers or neo-producers, especially if there is a political catalyst in the U.S. on the back of the Nuclear Fuel Working group report delivered to the President.
- **Catalysts:** Expect Azarga to get through the review period regarding the ASLB decision in their favour in mid-December 2019. Once that hurdle is cleared, we expect the Draft EPA permits to be finalized, with State-level permits to follow later in 2020.****

Other recommended ways beyond Azarga (AZZ-T) to play the U.S. sector catalysts are Uranium Energy Corp. (UEC-US) and Energy Fuels (UUUU-US). These more advanced producer/neo-producer names are both rated "Buy" and have demonstrated excellent torque to sector catalysts. Cameco (not rated) also has significant U.S. assets under care and maintenance, although its larger ex-US operations may dilute the response to U.S. specific catalysts.

Covered Names

- **NexGen Energy Ltd. (NXE-T) – Buy; $6.00 Target**
- **Uranium Energy Corp. (UEC-US) – Buy; US$2.60 Target**
- **Energy Fuels Inc. (EFR-T, UUUU-US) – Buy; US$3.50 Target**
- **Denison Mines Corp. (DML-T) – Buy; $1.60 Target**
- **Uranium Participation Corporation (U-T) – Buy, $5.90 Target**
- **Azarga Uranium Corp. (AZZ-T) – Buy, $0.50 Target**

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Important Disclosures

Of the companies included in the report the following Important Disclosures apply:

Ticker	Company	1	2	3	4	5	6	7	8
TSX:AZZ	Azarga Uranium Corp		X	X					
TSX:DML	Denison Mines Corp.			X	X				
AMEX:UUUU	Energy Fuels Inc.			X					
TSX:NXE	NexGen Energy Ltd.			X					
AMEX:UEC	Uranium Energy Corp.			X					
TSX:U	Uranium Participation Corporation								

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Distribution of Ratings (as of February 11, 2020)

	%	#	IB Clients (TTM)
Buy	77.1%	81	96.8%
Hold	13.3%	14	0.0%
Sell	1.0%	1	0.0%
Tender	1.0%	1	0.0%
UR (Buy)	1.0%	1	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	6.7%	7	3.2%

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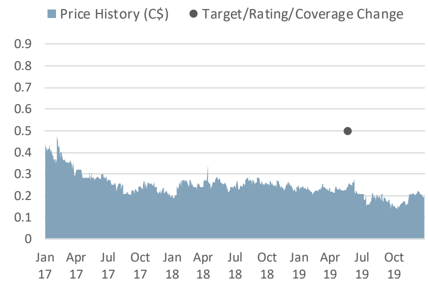
Price Chart, Rating and Target Price History (as of February 11, 2020)

Azarga Uranium Corp. (AZZ-T)

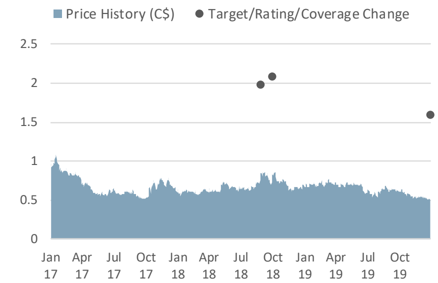
Date	Target(C$)	Rating
6/24/19	$0.50	Buy



Initiated Coverage: 6/24/2019

Denison Mines Corp. (DML-T)

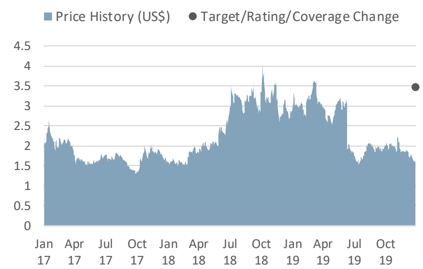
Date	Target(C$)	Rating
1/29/20	$1.60	Buy
10/30/18	$2.10	Buy
9/26/18	$2.00	Buy



Transferred & Re-initiated Coverage 08/20/12

Energy Fuels Inc. (AMEX:UUUU)

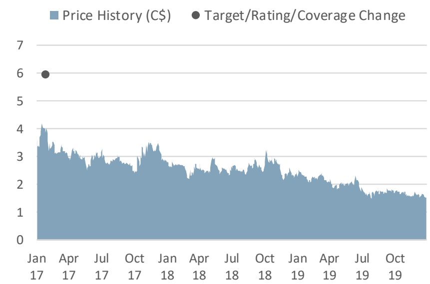
Date	Target(US$)	Rating
1/29/20	$3.50	Buy



Targets and prices prior to 11/06/13 adjusted for share consolidation; Transferred & Re-initiated Coverage 08/20/12; Targets prior to 05/31/16 converted to US$ at spot

NexGen Energy Ltd. (NXE-T)

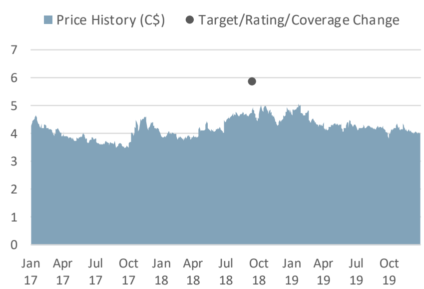
Date	Target(C$)	Rating
2/27/17	$6.00	Buy



Initiated Coverage 11/05/15

Uranium Participation Corporation (U-T)

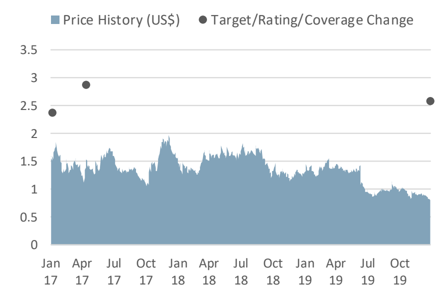
Date	Target(C$)	Rating
10/12/18	$5.90	Buy



Transferred & Re-initiated Coverage 08/20/12

Uranium Energy Corp. (UEC-AMEX)

Date	Target(US$)	Rating
1/29/20	$2.60	Buy
5/11/17	$2.90	Buy
2/3/17	$2.40	Buy



Transferred & Re-initiated Coverage 08/20/12

B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review
Source: Capital IQ and Haywood Securities

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