Cameco Corporation [NYSE: CCJ]

ality the barrow

Price Target: \$14.09 Upside: 46%

Industrials & Energy

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Overview of the Uranium Market

Opaque market with little price discovery occurring outside of long-term contracts

Long-term contracts

- > 7-10 years in length
- > Price discovery occurs here

>Bilateral vs. Request for Proposals

> 85% of volume negotiated bilaterally (confidential prices)

➤Utility behavior

- > Cyclical contracting periods
- > "Rush" to contract until perceived supply deficits overwhelm security of supply
- > U₃O₈ is only 4-8% of utility operating costs

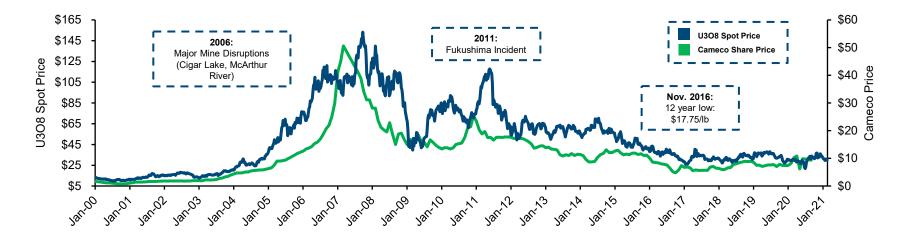
Inaccurate and delayed price reporting

- > UxC has limited and delayed information to report
- > Creates inefficiencies in utility contracting and capital markets

Investment Thesis

Investment Narrative

A qualitative overview before we get into the numbers...

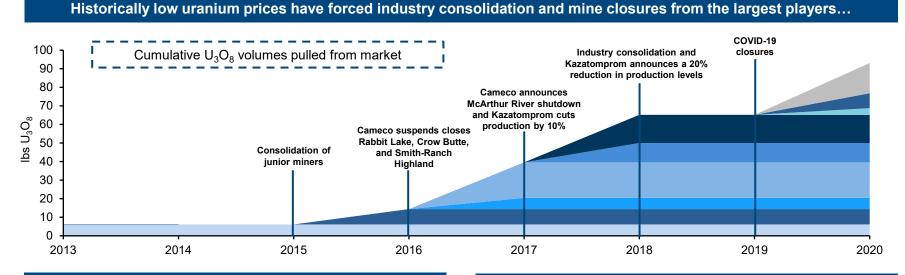


> Supply and demand are important factors in a materials market

- > Fukushima incident took 54 reactors offline indefinitely (~13% of global demand), creating structural supply surplus
- > Surplus exerted downward pressure on U_3O_8 prices, pushing it below AISCs for many suppliers
- > Since 2015, suppliers have significantly curtailed production, drawing down inventories and stockpiles to fill contracts
- > The diminished secondary market poses a serious threat to security of supply at current primary production levels
- > We believe utilities must return to the long-term market within three years, or they will not have fuel for their reactors

Shrinking Supply Security

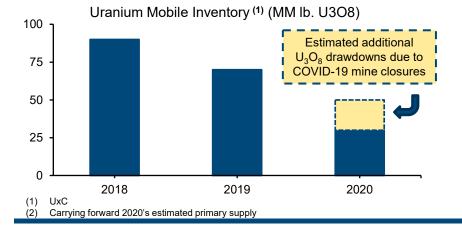
Security of supply is incredibly important for utilities, and it's not looking great...



Causing accessible mobile inventories to shrink...

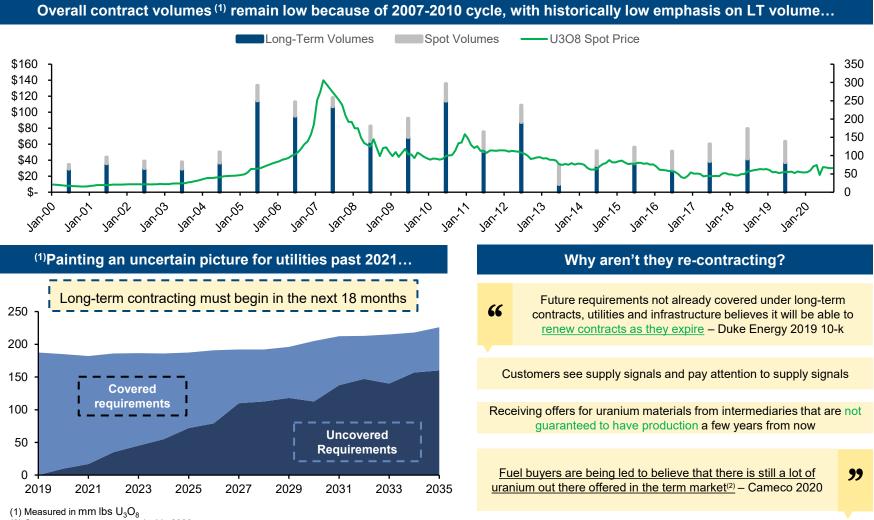


- > 2-years of production requirements in inventories = 400 mm
 - Estimated 2021 "all-in" supply = 150-160 mm
 - > 2021⁽²⁾ primary supply = 120-130 mm
 - Leftover 2020 mobile inventories = 30 mm
 - Assuming 2021 utility consumption of 200 mm, acquiring all available U₃O₈ supply results in a 40-50 mm inventory deficit



Failure to Contract and Uncovered Utility Requirements

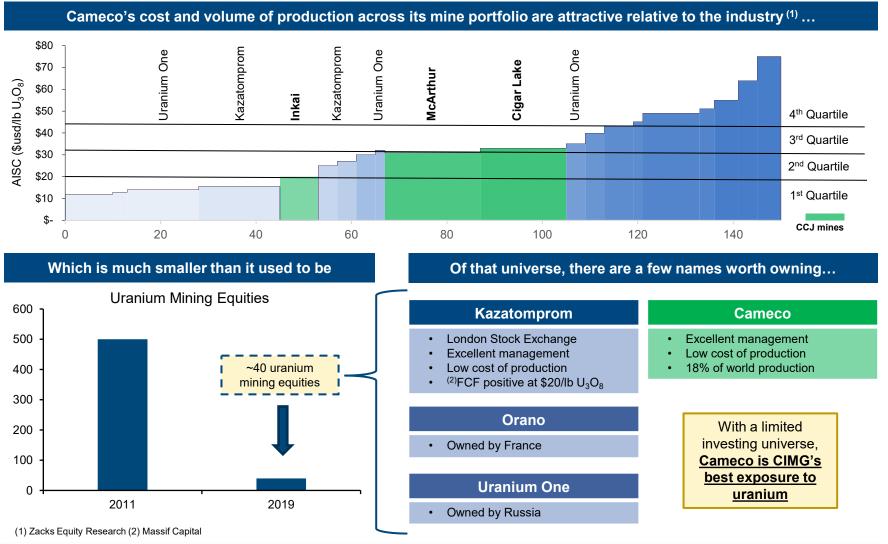
Utilities have been dragging their feet to re-contract due to mixed market signals



(2) Cameco management, round table 2020

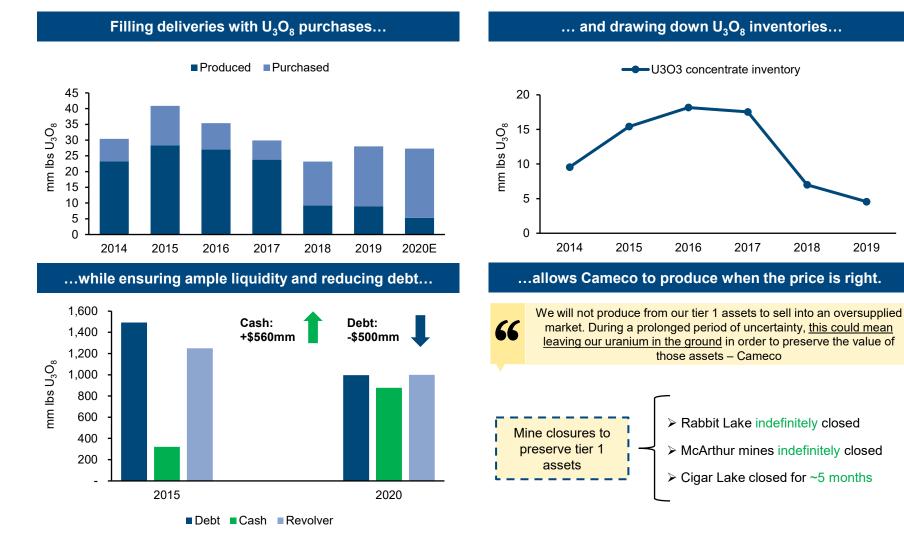
Why Cameco?

An industry leader in production cost & market share



Why Cameco? A Tier-I Preservation Strategy

Cameco's management has ensured they'll be able to protect their most valuable assets...



Valuation

Model Assumptions and Price Target

Contract prices dictate when the mines reopen

Bull Case (\$16.52 @ 35%)

- Recontracting efforts begin 1H21, prompting the reopening of mines in 2H21 with a return to full operation in 2H22
- Uranium prices at a 15% premium to current forward estimates
- Accelerated margin expansion as production is moved up

P/V	0.61
V/P	1.63
Implied upside	63%

2025 EBITDA	\$ 1,165
2025 Enterprise value	\$ 10,386
Implied EV/EBITDA exit multiple	8.92x

Base Case (\$14.41 @ 50%)

- Recontracting efforts begin 2H21, prompting the reopening of mines in 1H22 with a return to full operation in 1H23
- · Uranium prices at current forward estimates
- Median margin expansion as production is between bull and bear

P/V	0.70
V/P	1.42
Implied upside	42%

2025 EBITDA	\$ 1,131
2025 Enterprise value	\$ 8,876
Implied EV/EBITDA exit multiple	7.85x

Bear Case (\$7.37 @ 15%)

- Recontracting efforts begin 1H22, prompting the reopening of mines in 1H23 with a return to full operation in 2H23
- Uranium prices at a 35% discount to current forward estimates
- Delayed margin expansion as production is delayed

Expected Value: \$14.09

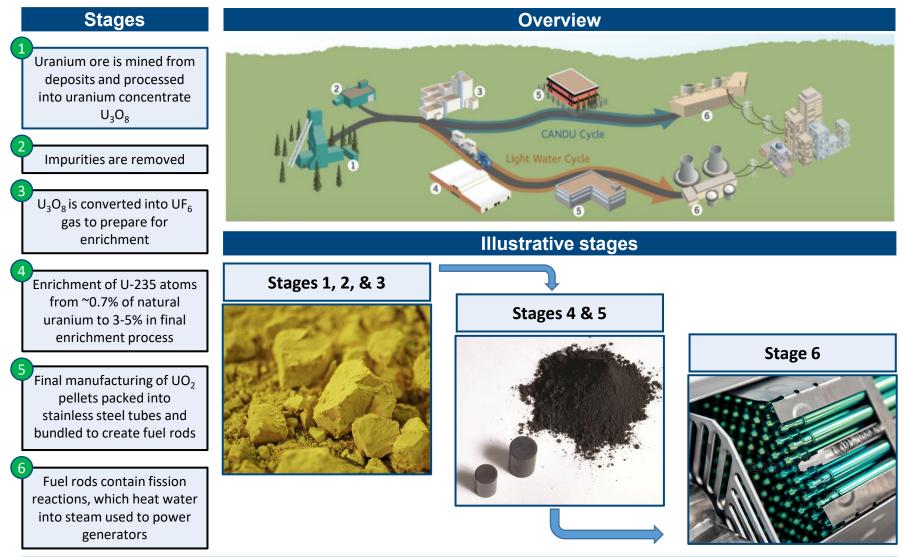
P/V	1.38
V/P	0.73
Implied upside	-27%

2025 EBITDA	\$ 703
2025 Enterprise value	\$ 4,817
Implied EV/EBITDA exit multiple	6.85x



The Nuclear Fuel Cycle

From mine to fuel bundle...



How is U₃O₈ Priced?

It's an opaque market with little price discovery occurring outside of long-term contracts

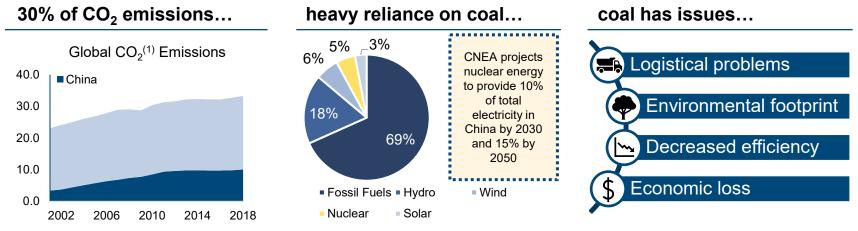
- There's not really a "spot price" or a "long-term contract price" ... these are both reported by a couple of price reporters who depend on their relationships in the industry and publish anonymized deals to get the most recent transaction prices.
- Long-term contracting process:
 - > Utility sends out an RFP
 - > Negotiations
 - Contractual negotiations
 - > A couple of months later this deal filters out to the price reporters
- >Long-term contracts aren't standard across the industry...
 - They're usually 60% fixed price that escalates over the course of the contract with the other 40% negotiated as a premium or discount to the "spot" price. There are cuffs and collars to prevent prices from swinging too wildly throughout the contract lifecycle.



Source: Un Consulting and TradeTech, Numeroo April 1, 2019

What is going in China?

The impetus for nuclear is increasing due to air pollution from coal-fired plants



The role of nuclear power in decarbonization							
Why decarbonization?	Renewable energy	Nuclear option	Current initiatives				
 Climate system responds to cumulative GHG emissions CO₂ can remain in atmosphere for several centuries Stabilizing emissions is not enough Goal is to reduce CO₂ emissions to zero by 2060 	 Leader in manufacturing and deployment of wind and solar generation Resources are in central China, but consumption centers are on the coasts Deployment costs are greater than construction cost of wind / solar farms 	 48 operating reactors 12 under construction Building 6-8 reactors a year 200 reactors by 2060 Requiring ~70 million lbs of uranium per year (28% of existing demand) Closed nuclear fuel cycle 	 Electricity Market reform Energy Development Strategy Action Plan Cut reliance on coal and promote clean energy Timely launch of nuclear projects on east coast Peak CO₂ emissions by 2030 				
Dependency on scaling up renewable and nuclear generation for electricity	Need a more reliable source of energy for electricity, increasing nuclear demand	 \$12 billion investment in 3rd generation nuclear reactors to become self-sufficient 	 GDP slowdown facilitates CO₂ peak by 2025-2030 				

Nuclear Power in Europe and Emerging Markets

Positive news on the demand side for Uranium

European Union

- EU becoming carbon neutral by 2050 with leaders acknowledging nuclear energy as part of the solution that must be included in the Green Deal agreement
- France delays their plan to reduce nuclear dependency from 75% to 50% by 10 years to 2035
 - Increasing uranium demand by ~5 million pounds per year (2% of existing global demand)

India

- Reinforced the country's aggressive pursuit of new nuclear power plants in order to improve the reliability of their power supply
- Currently 9 reactors under construction and government has granted administrative and financial support to build an additional 12 new reactors with capacity of 9,000 MW(e)

China

- Entered the market in 2010 and purchased contracts from 2014-2025, which are expiring soon
- Currently produces 15 million pounds, leaving 35 million to come from outside suppliers
- Announced decarbonization plan by 2060, which depends significantly on scaling up renewable and nuclear generation in the electricity section

Taiwan

- Overturned "nuclear free 2025" mandate imposed by the anti-nuclear democratic progressive party in 2017
- Possible future pro-nuclear decisions regarding extending the lives of existing nuclear power plants and completing the Lungmen nuclear plan

Russia

- No populist energy policy favoring wind and solar, the priority is unashamedly nuclear
- Projected to have half of its total electricity provided by nuclear and hydro in 2030
- "Russia's GDP gained three rubles for every ruble invested in nuclear power plants"- Rosatom
- RSA agreement expires in 2020 and is currently under review

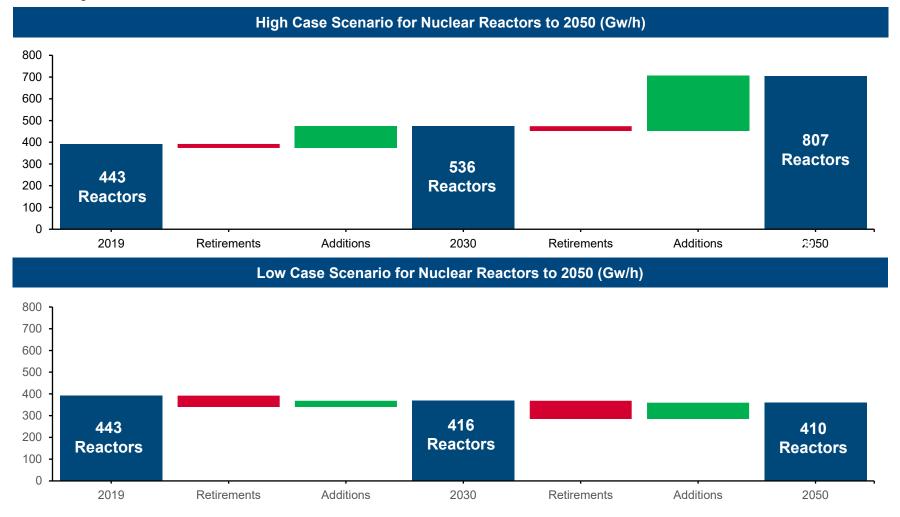
Middle East (UAE)

- Offering joint-venture contracts to foreign investors for the construction and operation of future nuclear power plants
 - Accepted a \$20 billion bid from South Korea to build 4 commercial nuclear reactors by 2020

66 Nuclear energy emerged as an environmentally promising and commercially competitive option with potential base-load contributions to the economy and future energy security – UAE Government Official

2020 International Atomic Energy Agency Nuclear Demand Projections

Steady bear case demand...



Nuclear Power Reactors In The World (end of 2019)

Appendix

Country	Operational Units	Net Capacity	Units Under Construction	Net Capacity	Share of total electricty produced
Argentina	3	1641	1	25	5.8%
Armenia	1	375			27.3%
Bangladesh			2	2160	
Belarus			2	2220	
Belgium	7	5930			46.2%
Brazil	2	1884	1	1340	2.5%
Bulgaria	2	2006			40.5%
Canada	19	13554			15.1%
China	48	45518	11	10564	4.7%
Czech Republic	6	3932			35.7%
Finland	4	2794	1	1600	34.7%
France	58	63180	1	1630	70.0%
Germany	6	8113			12.2%
Hungary	4	1902			48.8%
India	22	6255	7	4824	2.7%
Iran	1	915	1	974	1.9%
Japan	33	31679	2	2653	6.7%
Korea	24	23172	4	5360	25.0%
Mexico	2	1552			3.3%
Netherlands	1	482			3.2%
Pakistan	5	1318	2	2028	6.4%
Romania	2	1300			18.8%
Russia	38	28437	4	4525	18.6%
Slovakia	4	1814	2	880	51.9%
Slovenia	1	688			37.2%
South Africa	2	1860			5.7%
Spain	7	7121			21.2%
Sweden	7	7740			42.0%
Switzerland	4	2960			38.1%
Turkey			1	1114	
Ukraine	15	13107	2	2070	55.4%
U.A.E			4	5380	
United Kingdom	15	8923	2	3260	16.5%
U.S.A.	96	98152	2	2234	19.3%
World Total	443	392098	54	57441	10.4%

(1) Net Capacity measured in MW(e)

(2) Source: "Energy, Electricity and Nuclear Power Estimates for the period up to 2050" published by the International Atomic Energy Agency

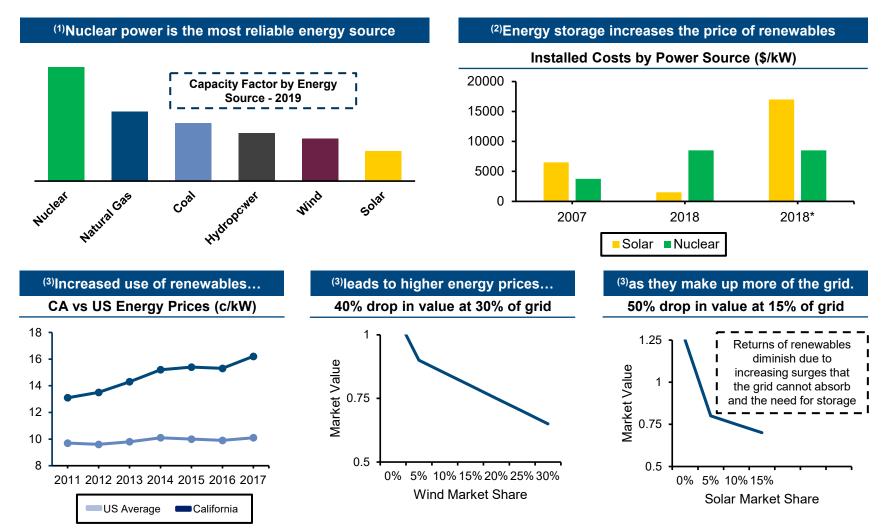
There are currently 54 reactors under construction around the world

Start	Country	Reactor	Model	Gross MWe
2020	Belarus, BNPP	Ostrovets 1	VVER-1200	1194
2020	China, China Huaneng	Shidaowan	HTR-PM	210
2020	China, CNNC	Fuqing 5	Hualong One	1150
2020	India, NPCIL	Kakrapar 3	PHWR-700	700
2020	Korea, KHNP	Shin Hanul 1	APR1400	1400
2020	Russia, Rosenergoatom	Leningrad II-2	VVER-1200	1170
2020	Slovakia, SE	Mochovce 3	VVER-440	471
2021	Argentina, CNEA	Carem25	Carem	29
2021	Belarus, BNPP	Ostrovets 2	VVER-1200	1194
2021	China, CNNC	Fuqing 6	Hualong One	1150
2021	China, CGN	Hongyanhe 5	ACPR-1000	1080
2021	China, CNNC	Tianwan 6	ACPR-1000	1118
2021	Finland, TVO	Olkiluoto 3	EPR	1720
2021	India, Bhavini	Kalpakkam PFBR	FBR	500
2021	India, NPCIL	Kakrapar 4	PHWR-700	700
2021	Korea, KHNP	Shin Hanul 2	APR1400	1400
2021	Pakistan	Karachi/KANUPP 2	ACP1000	1100
2021	Slovakia, SE	Mochovce 4	VVER-440	471
2021	UAE, ENEC	Barakah 2	APR1400	1400
2021	USA, Southern	Vogtle 3	AP1000	1250
2022	China, CGN	Fangchenggang 3	Hualong One	1180
2022	China, CGN	Fangchenggang 4	Hualong One	1180
2022	China, CGN	Hongyanhe 6	ACPR-1000	1080
2022	India, NPCIL	Rajasthan 7	PHWR-700	700
2022	Pakistan	Karachi/KANUPP 3	ACP1000	1100
2022	Russia, Rosenergoatom	Kursk II-1	VVER-TOI	1255
2022	UAE, ENEC	Barakah 3	APR1400	1400
2022	USA, Southern	Vogtle 4	AP1000	1250
2023	Bangladesh	Rooppur 1	VVER-1200	1200
2023	China, CNNC	Xiapu 1	CFR600	600
2023	France, EDF	Flamanville 3	EPR	1750
2023	India, NPCIL	Kudankulam 3	VVER-1000	1050
2023	India, NPCIL	Kudankulam 4	VVER-1000	1050
2023	India, NPCIL	Rajasthan 8	PHWR-700	700
2023	Korea, KHNP	Shin Kori 5	APR1400	1400
2023	Russia, Rosenergoatom	Kursk II-2	VVER-TOI	1255
2023	Turkey	Akkuyu 1	VVER-1200	1200
2023	UAE, ENEC	Barakah 4	APR1400	1400
2024	Bangladesh	Rooppur 2	VVER-1200	1200
2024	China, Guodian & CNNC	Zhangzhou 1	Hualong One	1150
2024	Iran	Bushehr 2	VVER-1000	1057
2024	Korea, KHNP	Shin Kori 6	APR1400	1400
2024	Turkey	Akkuyu 2	VVER-1200	1200
2025	China, CGN	Taipingling 1	Hualong One	1150
2025	China, Guodian & CNNC	Zhangzhou 2	Hualong One	1150
2025	UK, EDF	Hinkley Point C1	EPR	1720
2026	UK, EDF	Hinkley Point C2	EPR	1720

(1) U.S. Department of Commerce

Nuclear Power is Cost Effective

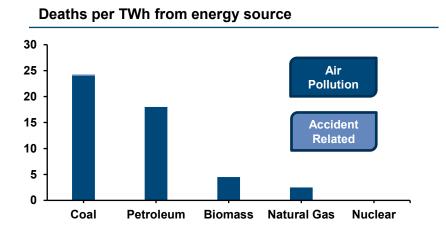
Wind and solar power have significant cost disadvantages compared to nuclear power



(1) US Energy Information Administration (2) Stanford University (3) Journal of Energy Policy and the OECD

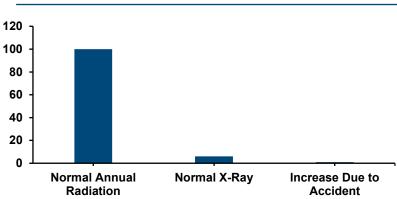
The Safety of Nuclear Power

Nuclear energy is significantly safer than other forms of energy



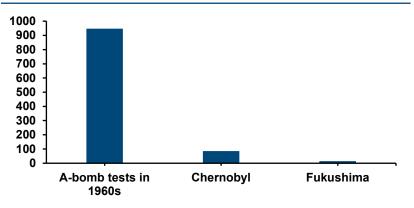
Harms from accidents are often exaggerated

- Out of over 17,000 cumulative reactor years, only 3 major accidents have happened
- Per official Soviet numbers, Chernobyl only resulted in 30 deaths
- "Nuclear power has *saved* 1.8 million lives to date by preventing the burning of fossil fuels." – James Hansen of Columbia University



Three-Mile Island accident radiation (mrem/year)

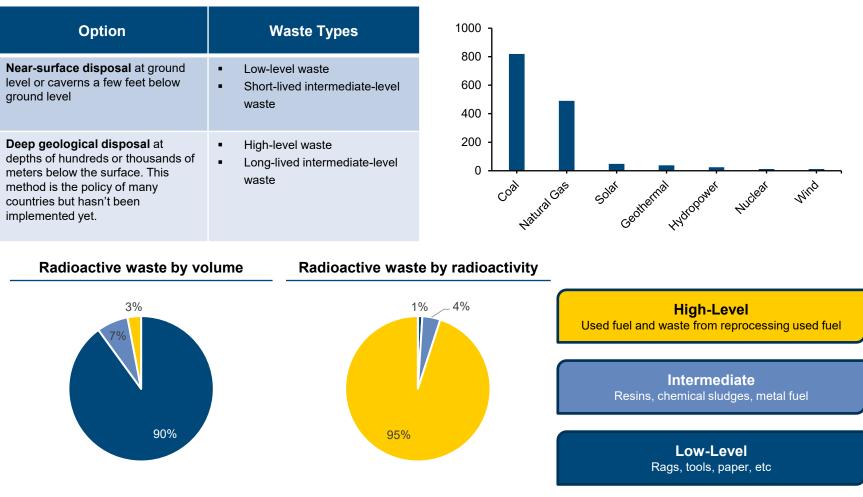
Radiation Releases (PBq of 137-Cs)



Radioactive Waste

Risks from radioactive waste are severely overblown

Utilities have many disposal methods to handle waste



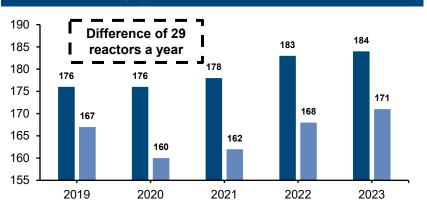
gCO2 Generated per kWh from energy sources

Potential Replacements for Uranium

Important in the long term, but currently not realistic

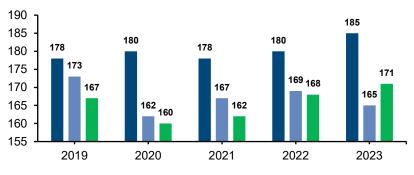
Reprocessed Uranium	Plutonium	Thorium
~5% of uranium from fuel rod can be recovered	Plutonium produced as a by-product can be reused as new fuel	Proprietary mixture of uranium and thorium going to market in 2024
This percentage is not expected to increase. It is only economical when supply is very low, or price is very high. Not performed world-wide.	Nuclear non-proliferation requires plutonium not be reprocessed as it can be used in nuclear bombs. Nuclear non-proliferation requires plutonium not be reprocessed as it can be used in nuclear bombs.	New development that is best used in heavy-water reactors. Only one company is planning to produce the fuel starting in 2024.

UxC Flawed Reporting Leads to Inefficiencies in the Uranium Market

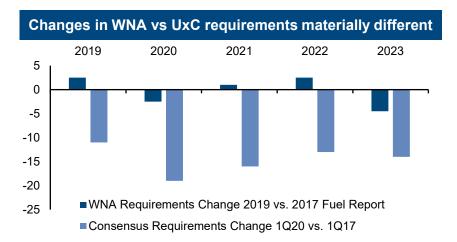


WNA Reactor U₃O₈ requirements are significantly higher

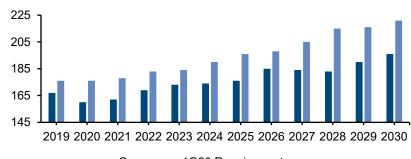




■1Q17 Requirements ■1Q18 Requirements ■1Q20 Requirements



UxC vs WNA Global U3O8 Requirements

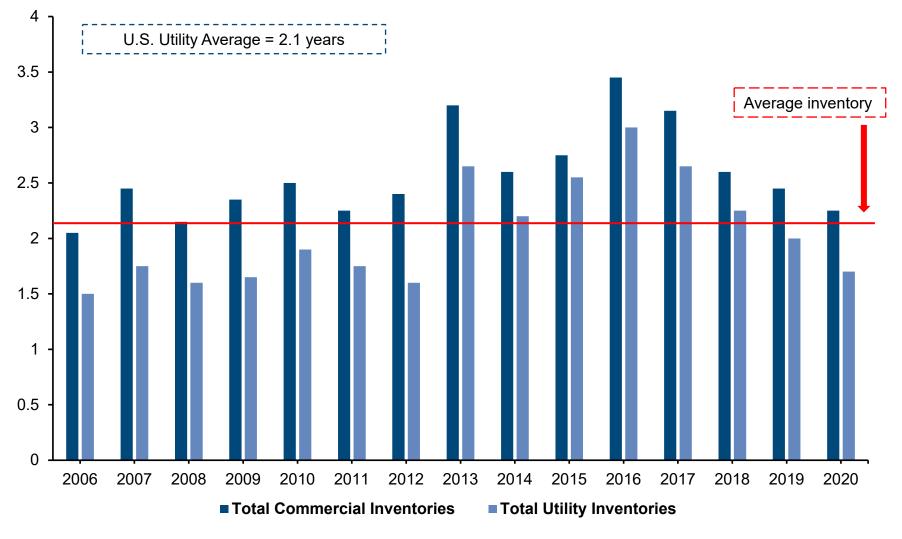


Consensus 1Q20 Requirements

WNA 2019 Fuel Report Requirements

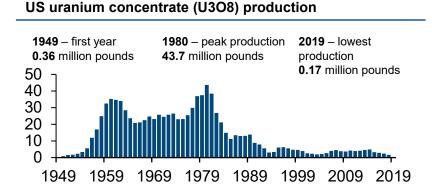
U.S. Inventories Are Actually Below Normal Levels

Total U.S. utility and commercial inventory in years



US Uranium Miners' Section 232 Petition

Falling domestic U3O8 production has led to the disappearance of US uranium mining companies



80 60 40 20 0 1949 1959 1969 1979 1989 1999 2009 2019

US domestic production and foreign imports of uranium

The Uranium Producers of America petitioned the government for a 25% import quota on US uranium

 In July 2019, the Trump Administration rejected their proposal and instead formed the Nuclear Fuel Working Group in order to address the concerns regarding domestic uranium production and to ensure a comprehensive review of the entire domestic nuclear supply chain.

The ruling was viewed favorably by Cameco

 Tim Gitzel, Cameco's CEO: "Uranium supplied by Cameco or Canada for zero-carbon energy generation had never been a threat to US national security. <u>Cameco will participate in the efforts of this Working Group</u> <u>in any way we can.</u> As a long-term commercial producer, employer, supplier and investor in the US uranium and nuclear energy sectors, we want to see this industry succeed and grow.

⁽¹⁾ US Energy Information Administration

Nuclear Energy in the 2020 Political Landscape

The Democratic Party is finally starting to support nuclear power again

"We support a technology-neutral approach that includes all zero-carbon technologies, including hydroelectric power, geothermal, existing and advanced nuclear, and carbon capture and storage."

"



"<u>Identify the future of nuclear energy.</u> To address the climate emergency threatening our communities, economy, and national security, we must look at all low and zero carbon technologies, such as small modular nuclear reactors at half the construction cost of today's reactors. That's why <u>Biden will support a research agenda</u> to look at issues, ranging from cost to safety to waste disposal system, that remain an ongoing challenge with nuclear power today." – *Joe Biden 2020 Campaign Platform*

Recent legislation under the Trump Administration supports nuclear power and uranium

- Nuclear Energy Innovation and Modernization Act (2019)
 - Directed the Nuclear Regulatory Commission to make regulations move more quickly for establishing nuclear reactors
 - Established a faster licensing structure for advanced nuclear reactors
 - Imposed a cap on the NRC's fees for existing reactors
 - Created the Nuclear Fuel Working Group in order to "to develop recommendations for reviving and expanding domestic nuclear fuel production"
- 2020 Federal Budget
 - Sets aside \$150 million a year for 10 years to establish a strategic uranium reserve
 - Goal is to "to provide additional assurances of availability of uranium in the event of a market disruption"
- Nuclear Energy Innovation and Capabilities Act (2018)
 - Speeds up the development of advanced reactors in the US by eliminating regulations and financial barriers
 - Commits the government to further support of the private sector through cost-sharing partnerships and the development
 of research infrastructure

Fuel buyers are waiting for this trade dispute to end before renewing contracts

⁽¹⁾Recent draft amendments from the Department of Commerce and Rosatom look favorable for the industry

• A draft amendment submitted on October 5th would:

- Reduce U.S. imports of enriched uranium from Russia from 20% in 2020 to 15% in 2028
- Strengthen existing protections for the US commercial enrichment industry by reducing the Agreement's export limits
- Limits U3O8 imports from Russia to 5% in 2026, which would positively help U.S. and Canada uranium miners
- Allow for the fulfillment of U.S. customers' preexisting contracts for Russian uranium
 - · Utilities are not forced to renew these contracts immediately

⁽¹⁾The Russian Suspension Agreement has played a role in making utility buyers wait to renew long-term contracts

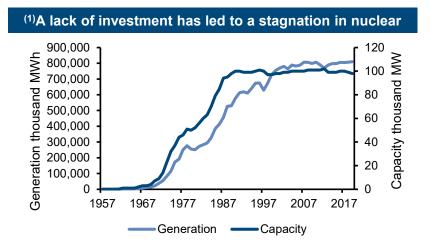
• Long-term contracting declined 37% during H1 2020.

- Many utilities are on the sidelines waiting clarity on the Russian Service Agreement and the President's Nuclear Fuel Working Group
- Kazatomprom management indicated in their 2Q 2020 earnings call that fuel buyers will begin negotiations in the fall for long-term contracts after these issues have been addressed

Nuclear Power in the United States

The nuclear power industry has largely remained unchanged since the 1980s

eia



⁽¹⁾California has been reluctant to invest in nuclear power



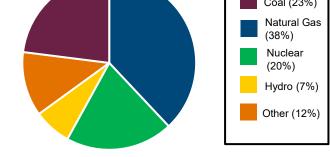
Locations of U.S. nuclear power plants

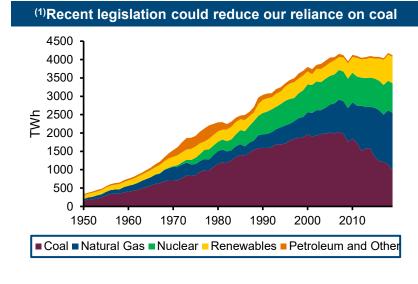
Source: U.S. Energy Information Administration, U.S. Energy Mapping System, April 2020

(1) U.S. Energy Information Administration

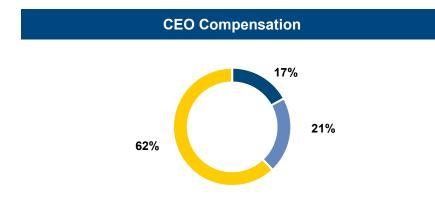
Coal (23%)
Natural Gas
(38%)

⁽¹⁾Nuclear power provides 20% of our electricity



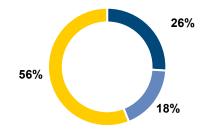


Management Compensation

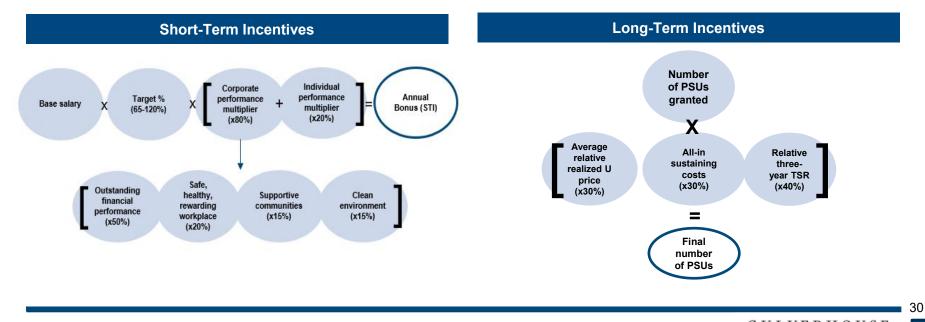


Base Salary Short-term incentive Long-term incentive

Other C-Suite Compensation Plans

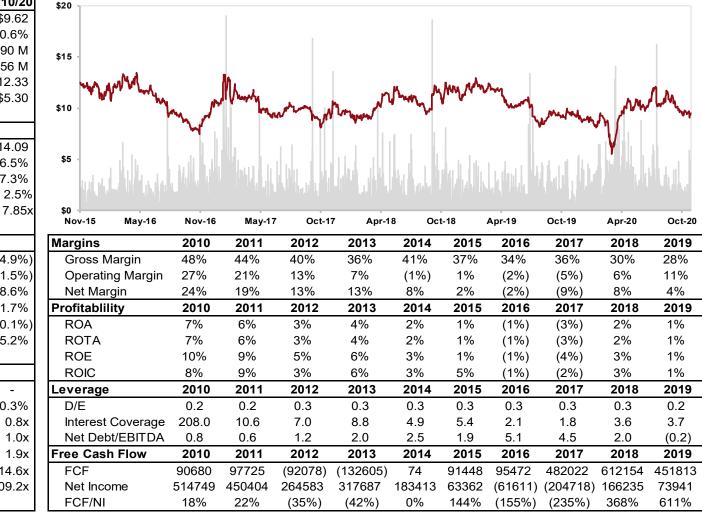


Base Salary Short-term incentive Long-term incentive



Cameco Corporation Tear Sheet

Stock	11/10/20	\$2
Price	\$9.62	
Div Yield	0.6%	
Market Cap	3,807,990 M	\$1
EV	4,032,456 M	ψı
52 Week High	\$12.33	
52 Week Low	\$5.30	\$1
		\$10
Intrinsic Valuation		
Value/Share	\$ 14.09	
Upside	46.5%	\$
Discount Rate	7.3%	
LTGR	2.5%	
Exit Multiple	7.85x	\$(N
Business		Ма
5 yr Rev CAGR	(4.9%)	(
5 yr EBIT CAGR	(31.5%)	(
Gross Margin	8.6%	1
EBIT Margin	1.7%	Pro
Net Margin	(0.1%)	F
Tax Rate	115.2%	F
		F
Market Valuation (TTM)	F
P/E	-	Le
FCF Yield	0.3%	[
P/B	0.8x	1
P/HBV	1.0x	1
EV/Rev	1.9x	Fre
EV/EBITDA	14.6x	F
EV/EBIT	109.2x	1
		F



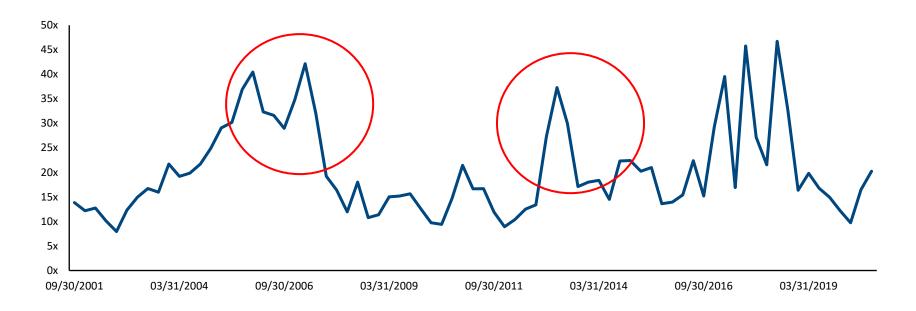
Profitability	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross Margin	48%	44%	40%	36%	41%	37%	34%	36%	30%	28%
EBIT Margin	22%	21%	12%	11%	2%	9%	-6%	-6%	3%	5%
EBITDA Margin	34%	33%	24%	22%	16%	20%	9%	9%	19%	20%
ROIC	8%	9%	3%	6%	3%	5%	-1%	-2%	3%	1%
ROA	10%	9%	5%	6%	3%	1%	-1%	-4%	3%	1%
ROE	7%	6%	3%	4%	2%	1%	-1%	-3%	2%	1%
ROTA	7%	6%	3%	4%	2%	1%	-1%	-3%	2%	1%

Solvency	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Debt/Equity	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Interest Coverage	208.0	10.6	7.0	8.8	4.9	5.4	2.1	1.8	3.6	3.7

Growth	
5-yr Revenue CAGR	-5%
5-yr EBIT CAGR	-32%
5-yr EBITDA CAGR	-13%
5-yr Uranium Price CAGR	-4%

Looking at EV/EBITDA

Market re-rates CCJ as uranium prices increase



Implied multiples in our Base model										
		2021		2022		2023	2024		2025	
EBITDA							\$ 1,327			
EV	\$	3,637	\$	8,439	\$	9,788	\$ 11,335	\$	8,876	
EV/EBITDA		5.14		7.27		7.61	8.54		7.85	

If the market assigns a multiple similar to the ones in previous periods of higher uranium prices to our DCF projections, CCJ has tremendous upside...