

## An Inventory-Driven Market

Much has been made recently of the high levels of inventories held by many utilities and suppliers around the world. These inventories are augmented by large government stockpiles, especially in Russia and the U.S., as well as smaller levels by investors and traders. As our own Jonathan Hinze laid out in a speech at the recent WNA Symposium, when added up, the entire world stockpile of uranium in all forms (including U<sub>3</sub>O<sub>8</sub>, UF<sub>6</sub>, EUP, fabricated assemblies, as well as HEU, depleted uranium (DU), and off-spec material) could total as much as 1.1 billion pounds U<sub>3</sub>O<sub>8</sub>e (~423 million tonnes U). This is a staggering sum and obviously concerns many market participants, especially producers. While this number is certainly large, there are a number of important considerations that must be addressed when evaluating the role that these high levels of inventories play on the current market as well as into the future. Our aim in this cover is to look behind these numbers and present some of the factors impacting inventory supply and demand.

### Not all inventories are alike

As a starting point, it is critical to understand that inventories have been and always will be a part of the nuclear fuel market. The nuclear fuel pipeline is quite long as uranium typically has to be converted, enriched, and fabricated. These pipeline stocks are not available to the market or even available for consumption, whether held by utilities or suppliers. Utility inventories are also rarely as fungible as those held by suppliers, as utilities are often quite limited in their ability to sell material back into the market. Meanwhile, government stockpiles are often in a form that is not readily available to the market (e.g., HEU that needs downblending or tails that need re-enriching). It is thus useful to review how much of what we call inventories is actually re-sellable in the near- or mid-term.

### How much is “excess”

There is no simple way to quantify the excess inventories in the system, but it is quite clear that the vast majority of the 1.1 billion pounds U<sub>3</sub>O<sub>8</sub>e is not readily available to the market.

**U.S. Utilities:** Forward coverage in the U.S. has traditionally been around 12-18 months, and it is currently near 30 months. So, one could argue that U.S. utilities might look to decrease their inventories to better align with their standard policies, although some of the reasons for these higher inven-

Ux Price Indicators					
<b>Weekly Ux U<sub>3</sub>O<sub>8</sub> Price<sup>®</sup> (10/5/15)</b>		<b>\$37.00 (+\$0.50)</b>			
<b>Month-end (9/28/15)</b>					
<b>U<sub>3</sub>O<sub>8</sub></b>	Spot	<b>\$36.50</b>	<b>UF<sub>6</sub> Spot</b>	NA Price	<b>\$99.00</b>
	Long-Term	<b>\$44.00</b>		NA Value*	<b>\$102.37</b>
<b>Conversion</b>	NA Spot	<b>\$7.00</b>	<b>SWU</b>	EU Value*	<b>\$102.87</b>
	NA Term	<b>\$15.00</b>		Spot	<b>\$62.00</b>
	EU Spot	<b>\$7.50</b>	Long-Term	<b>\$77.00</b>	
	EU Term	<b>\$16.00</b>	<b>EUP</b>	NA Spot*	<b>\$1,432</b>
*Calculated values				NA Term*	<b>\$1,808</b>

ories are because U.S. utilities, in particular, have been taking advantage of low spot prices via buy-and-hold strategies. Thus, most U.S. utilities are not expected to sell any of their inventories, but their high level of forward coverage does mean that they can be choosier about purchasing material in the future.

**EU Utilities:** Forward coverage for European utilities today is around 41 months, and averages or standard policies are closer to 24-30 months. Thus, we should also expect these utilities will look to reduce their inventories through lower contracting levels over the next several years. However, direct sales of material from EU utilities are also quite unlikely unless reactors are shut down rapidly without prior planning.

**Japan:** Japanese inventories remain a big wild card. Some utilities may seriously consider selling off some of their inventories, but they have little economic incentive to do so given that their inventories are on the books at much higher purchase costs and the carrying costs can still be passed on directly to their customers. While up to 25% of Japanese inventories could be considered excess, any disposal of this material over the next few years will likely be a small drip effect and not a huge gush of material. Moreover, the majority of this material will probably stay under Japanese auspices. However, one thing is very clear: given their huge inventories and lower future demand, Japanese utilities will not be signing large, new fuel contracts anytime soon.

**China:** There is almost no chance that Chinese utilities will sell their inventories as the government desires very large strategic stocks. Still, China's high level of inventories today

along with the slower ramp-up in its reactor program due to post-Fukushima delays mean that there is certainly less buying need right now. Considering also that CGN's Husab mine in Namibia will start producing soon, additional supply will be flowing to China on top of quantities that have already been contracted. Ultimately, we could see a situation where China's total uranium imports drop 10-20% in the coming years from the annual average over the past 2-3 years of 65 million pounds  $U_3O_8$ e.

**Suppliers and Investors:** The ~50 million pounds  $U_3O_8$ e of supplier and investor-held material that UxC currently estimates is probably the most fungible material out there. Some of the inventory held by suppliers is also pipeline material, but at least 15 million pounds should be viewed as available for resale. Of course, some of this supplier/trader material is already locked up in mid-term contracts, but if a trader or supplier decides that buying spot material in the future is cheaper than holding material in inventory, then you could see quite a few of these inventory pounds sold back into the market. Of course, any carry-trades that these same suppliers/traders have committed to will mean that future material will also be needed to fulfill these contracts.

**U.S. Government:** The U.S. Department of Energy (DOE) holds 120-145 million pounds  $U_3O_8$ e in various forms (natural  $UF_6$ , HEU, DU, and off-spec LEU). Through 2019, UxC estimates 6-8 million pounds per year will be come to the market, but the largest portion available after that is the DU tails material, which requires a re-enrichment program. Thus, there are questions regarding the quantity and timing of long-term future U.S. government inventory disposition.

**Russian Government:** Most of the current Russian inventory material coming to the market is re-enriched tails. However, there are also still large  $U_3O_8$  and HEU stockpiles in the country. The HEU remains under the military control and is unlikely to be classified as excess for the foreseeable future. Given Russia's ongoing reactor exports and other considerations, some of its existing inventories may be used for commercial purposes in the future. Still, it is more likely that Russia will continue to look for ways to access additional natural uranium resources around the world rather than dip into its existing stockpiles.

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## Conclusions

Like it or not, the post-Fukushima marketplace has created significant oversupply in all parts of the fuel cycle, and this is naturally having the effect of increasing inventories held by nearly every major market participant. Even if most of these are obligated inventories, and thus are unlikely to re-emerge as material for resale on the market, there are several effects on the market. Given the low price environment over the past few years, the first effect has been a massive increase in both buy-and-hold and carry-trade activity. This may help to suck up the excess material in the spot market, but it also has done so without driving up spot prices – a good argument can be

made that without this activity, spot prices would be even lower than they are right now. At the same time, this activity can be characterized as “stealing demand” from the future, and thus utilities' actual needs for purchasing are being reduced over the next 3-5 years. A clearer picture of future price expectations is also now available with the evolution of forward price curves, such as those published by Numerco Ltd., which in turn creates opportunities for placing current inventory material into future contracts.

As our brief review illustrates, the overall “excess” of inventories is a relative number. Clearly, most of the inventory material is locked up and not available to the market anytime soon. Utilities are not in a position to sell in most cases, so even if they have excess, it will be used to supplant future contracting needs or as a hedge against future price increases. Much of the government stockpiles is excess, but there is no clear road map for how this material will come to the market. The biggest portion of uncommitted inventory is held by suppliers and traders, and, in the end, it is not all that much when considering the broader market volumes.

Ultimately, there is no doubt that this current inventory-driven market will be with us for several more years and probably at least until the end of this decade. There are many ramifications of the current high level of inventories and the potential for additional oversupply in the coming years to add to these inventory levels. UxC is embarking on additional analysis of this important topic in the form of a new special report, as the implications of inventories for future supply and demand as well as price developments are enormous.

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## News Briefs

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### License application for new reactors at South Texas Project moves closer to approval

In an October 1 press release, the U.S. Nuclear Regulatory Commission (NRC) announced that it has completed a Final Safety Evaluation Report in support of Nuclear Innovation North America's combined construction and operating licenses (COL) application for two Advanced Boiling Water Reactors at the South Texas Project nuclear power plant. The report concludes that there are no safety issues that would prevent the NRC from issuing licenses for the reactors. Following completion of the report a mandatory hearing will be held, and the NRC will then vote on whether to issue the licenses.

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### NRC moves closer to approving Early Site Permit for PSEG

On October 1, the U.S. Nuclear Regulatory Commission (NRC) announced the completion of the Final Safety Evaluation Report in support of PSEG's Early Site Permit application for a potential nuclear power plant adjacent to Salem and Hope Creek. The report determined that there are no safety issues that would prevent the NRC from issuing an Early Site

Permit. The NRC's Atomic Safety and Licensing Board will now hold a hearing on the permit. The Early Site Permit process allows for environmental issues and other site issues to be addressed prior to a possible combined construction and operating license.

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### **Restart of second Japanese reactor planned on October 15**

Kyushu Electric Power has informed Japan's Nuclear Regulatory Authority that it plans to restart Unit 2 at the Sendai nuclear power plant on October 15 provided that tests are successfully completed. The utility will carry out a testing on October 14 to verify that control rods function properly. If testing is successfully completed as scheduled, Sendai 2 will become the second reactor in Japan to restart. Sendai 1 returned to commercial operation on September 10.

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### **Key milestone announced for VVER-1000 reactor under construction in China**

According to a September 30 press release from Rosatom subsidiary Atomstroyexport, the containment dome for Unit 4 at the Tianwan nuclear power plant in China has been successfully installed. Tianwan 4, a Russian VVER-1000 reactor, is expected to begin operation in 2017. Tianwan 3, which is also a VVER-1000 unit, is expected to begin operation in 2016.

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### **French nuclear finds AREVA testing program for Flamanville 3 acceptable**

On Thursday, a group of experts from France's Nuclear Safety Authority (ASN) determined that AREVA's testing program for the Flamanville 3 reactor vessel is acceptable. The group has made recommendations, and the ASN will now determine its official position regarding these recommendations. The tests AREVA plans to carry out regarding the structural integrity of the reactor vessel will start in the beginning of 2016 and are expected to last several months. After the testing program is completed, the expert group will then evaluate the test results and ASN will make a determination as to the safety of the reactor vessel. Flamanville 3, a 1,650 megawatt European Pressurized Reactor (EPR), has experienced multiple delays and is now expected to attain initial criticality at the end of 2018. However, the reactor could face expensive repairs and may even be scrapped if the ASN were to determine that the pressure vessel is unsafe.

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### **Regulator grants 10-year lifespan extensions for two Belgian reactors**

On October 1, Belgium's Federal Agency for Nuclear Control (FANC) announced that it granted authorization for Units 1 and 2 at the Doel nuclear power plant to operate for an additional 10 years until 2025. Earlier this year, Belgium's government amended a law that prohibited reactors from operating for more than 40 years. With approval from the FANC, Doel 1, which had been offline since it attained 40 years of

operating life in February, could resume operation in December after it completes required inspections. Before reactor owner Electrabel makes a final decision to allow Doel 1 and 2 to continue operation, it plans to discuss economic conditions regarding the lifespan extensions with Belgium's parliament.

In related news, on October 1, Electrabel's parent company, Engie announced that Unit 3 at Doel and Unit 2 at Tihange would remain idle at least through January 1, 2016. Cracks have been discovered in both reactors and the company stated that the outages for both units will reduce its income by €40 million per month.

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### **Shareholders meeting to determine fate of Oskarshamn 1 and 2 in Sweden**

On October 14, a shareholders meeting will be held to determine the fate of Units 1 and 2 at the Oskarshamn nuclear power plant in Sweden. E.ON holds a 55% stake in the two reactors and favors the closure of both units as electricity prices in Sweden have declined sharply in recent years. Fortum, which holds a minority interest in the units of about 43% has expressed opposition to the plant's closure but does not have the ability to block the reactors from being decommissioned. If a final decision is made in favor of closure, Unit 2, which has been offline since 2013, will not be reopened and Unit 1 will be closed sometime between 2017 and 2019. Fortum has estimated that closing the two reactors will result in a negative impact of €700 million on its net profit for the third quarter of 2015.

In related news, the European Union Court of Justice has determined that Sweden can continue taxing its reactors based on available power as opposed to electricity generation. The court found that the tax, which was contested by E.ON, does not fall within its jurisdiction as it is a matter for Swedish courts to decide. In August, Sweden hiked its nuclear taxes by 17%, which results in an annual cost for utilities of nearly \$550 million. Now that the European Union's highest court has made its ruling, a Swedish court will make a final determination on the validity of the tax. E.ON has cited Sweden's nuclear taxes as a factor in its push to close Units 1 and 2 at Oskarshamn.

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### **Energy Fuels changes production capabilities at Nichols Ranch ISR**

Energy Fuels Inc. announced September 29 that it commenced construction of the elution circuit at its Nichols Ranch in-situ recovery (ISR) uranium project process plant located in Wyoming's Powder River Basin. Following commencement of production at Nichols Ranch in April 2014, the company has shipped loaded resins to other nearby third party-owned facilities for final yellowcake stripping, drying, and packaging. Upon completion of construction of the elution circuit at the Nichols Ranch processing plant, Energy Fuels will have entirely self-contained its ISR processing capabilities.

When previous owner, Uranerz Energy Corp., constructed

the Nichols Ranch ISR project, it originally designed and constructed the process plant to be scalable, with installation of the elution circuit postponed until it was economically feasible. As a result, the Nichols Ranch plant was designed with ample space to accommodate the facilities and equipment now being installed by Energy Fuels. The company expects to spend approximately US\$3.9 million to complete these plant upgrades, and expects to realize a positive return from this investment.

### Toro's Wiluna project likely delayed

The *Australian Associated Press* reported last week that Toro Energy Ltd.'s Wiluna uranium mine in Western Australia is likely to be delayed due to the ongoing downturn in global uranium demand and prices. Toro Managing Director Dr. Vanessa Guthrie told the press, "We will get to build Wiluna when we get the price that makes Wiluna economic. We are not seeing that price today." While Dr. Guthrie stated that the company remains confident in the fundamentals of the uranium mining sector over the long term, she said that prices will need to rise to between US\$60-70 per pound U<sub>3</sub>O<sub>8</sub> in order for Wiluna to turn a profit. Subsequently, Wiluna is now likely to be delayed until the 2018-2020 timeframe. "There is not enough supply coming into the market that will meet demand in 2025. You will have a shortfall of 20-30 million pounds every year from about 2018 onwards," said Dr. Guthrie.

Toro Energy owns and operates the Wiluna uranium mine, which is located approximately 960 kilometers northeast of Perth. Wiluna is the first new uranium mine in Western Australia to receive government approval since the state's uranium mining ban was lifted in 2008.

### Alliance to focus on Chilean U-project following sale in Four Mile ISR

Alliance Resources Ltd. recently reported that following the sale of the company's 25% interest in the Four Mile in-situ recovery (ISR) uranium project in South Australia to Quasar Resources Pty Ltd. for A\$73.975 million, the company would use the proceeds from this sale to evaluate uranium acquisi-

tion and exploration opportunities in Chile near its Monardes Basin uranium-copper project. The company recently completed an airborne magnetic and radiometric survey of Monardes, which "identified two sub-parallel uranium-anomalous units with a combined strike length of 9 km within Alliance's concessions."

Alliance's 100%-owned Monardes project is located in the eastern margin of the Monardes basin, about 95 kilometers east of Copiapo, Chile. The company's tenements consist of an option to purchase the Monardes concessions for US\$2.5 million, plus two 100%-owned exploration concessions adjacent to the Maricunga Belt.

### Cauldron reports Bennet Well drill results

Cauldron Energy Ltd. announced September 30 that it recently completed a drill program at the company's wholly-owned Bennet Well uranium deposit in Australia. This drill program was designed to test the extent of uranium mineralization in the Bennet Well Channel and consisted of seven mud rotary drill holes for 703 meters of a total of 4,000 meters in the current drill campaign. Highlights from this round of drilling include: 4.15 meters grading 0.0529% U<sub>3</sub>O<sub>8</sub>, 3.05 meters grading 0.0397% U<sub>3</sub>O<sub>8</sub>, 1.9 meters grading 0.048% U<sub>3</sub>O<sub>8</sub>.

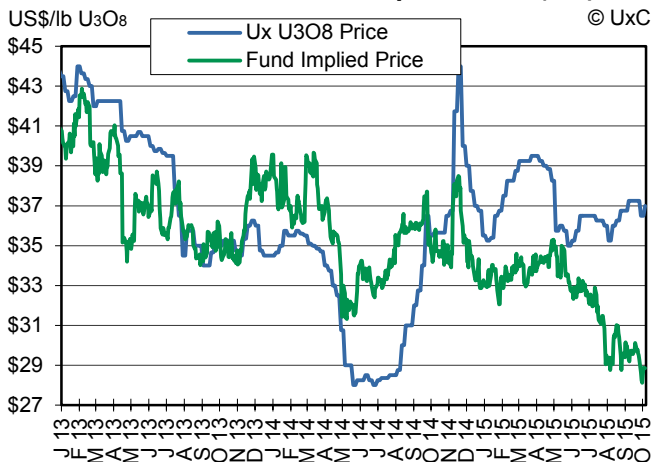
Cauldron said that the Bennet Well Channel is a linear zone of mineralization proximal to the Bennet Well Mineral Resource Area that extends to the southeast for at least 3.2 kilometers and is about 500 meters wide. Furthermore, new modeling of mineralization at Bennet Well has defined fifteen mineralized lenses. Scout drilling continues at the Bennet Well Extended exploration target. The Bennet Well Channel currently hosts a JORC-compliant indicated resource estimate of 21.5 million pounds U<sub>3</sub>O<sub>8</sub> grading 0.027% U<sub>3</sub>O<sub>8</sub>.

### Forte Energy pulls out of partnership with European Uranium; Kuriskova project

European Uranium Resources Ltd. reported October 2 that the July 31, 2014 partnership agreement between it and Forte Energy NL has been terminated as Forte voluntarily forfeited its 50% beneficial interest in Ludovika Energy and Ludovika Mining to the company. Ludovika Energy and Ludovika Mining represent the partnership's subsidiary tasked with exploring, permitting, and eventually mining the Kuriskova and Novoveska Huta uranium projects in Slovakia.

The Kuriskova uranium project hosts JORC-compliant resources of 76.5 million pounds U<sub>3</sub>O<sub>8</sub>, located in Slovakia. However, licensing has been a contentious issue for the companies as of late as the Slovakian Ministry of Environment in June refused to grant exploration permits at Kuriskova. In July, Forte and European Uranium filed court proceedings against the Ministry and asked the court to review the Ministry's decision to withhold the licenses. Multiple mining media reports indicate that Forte Energy will shift its focus to the Olympic Domain copper project in South Australia.

Ux U<sub>3</sub>O<sub>8</sub> Price vs. Fund Implied Price (FIP)



# The Market

## September Market Review

Despite a couple of movements in the spot U<sub>3</sub>O<sub>8</sub> price and recent declines in conversion and SWU prices, overall spot activity slipped somewhat for most of September. However, uranium activity picked up going into the last week of the month. A total of 24 spot transactions were reported during the month. All transactions involved U<sub>3</sub>O<sub>8</sub>, with no conversion or enrichment spot activity reported. Total volume for the month was 2.7 million pounds U<sub>3</sub>O<sub>8</sub>, and with current activity the annual total is now 36.4 million pounds U<sub>3</sub>O<sub>8</sub> equivalent under 217 transactions. In the term market, a total of seven utility contract awards were reported during the month. Of this total, six involved U<sub>3</sub>O<sub>8</sub> and the other was for UF<sub>6</sub>.

## Uranium Spot Market

As noted above, the market was fairly active last week, as month-end pricing activity took place. Price ticked up somewhat toward the end of the week, and going into this week buying interest has continued with traders, utilities, and producers all looking to potentially purchase material. Based on recent activity as well as currently available bids and offers, the Ux U<sub>3</sub>O<sub>8</sub> Price increases to \$37.00 per pound, up \$0.50 for the week.

Several term awards, including a few with mid-term delivery were recently reported, contributing to some of the recent spot demand interest by intermediaries. Spot purchase activity by utilities has also picked up including a non-U.S. utility request that has offers due next week for about 800,000 pounds U<sub>3</sub>O<sub>8</sub> with delivery in July 2016.

Many market participants are attending the NEI's International Uranium Fuel Seminar in Colorado, and it will be interesting to see if any consensus about the direction of the market emerges from that meeting. As mentioned above, price is currently at a level that is attracting fairly widespread buying interest. Along these lines, mid-term activity has picked up somewhat over the past month with a number of market participants seeking to lock in prices for future delivery.

## UxC Broker Average Price

The UxC Broker Average Price (BAP) began the week on Tuesday up \$0.13 to \$36.63. A day later, prices began their descent, which culminated in the indicator reaching \$36.31 by Thursday. However, on Friday, the midpoint reversed course by \$0.69 to finish the day at \$37.00. Today's UxC BAP is \$37.00, unchanged from Friday and up \$0.50 from last Monday's \$36.50. The BA Bid is \$36.63, up \$0.38 from last Monday's \$36.25, and the BA Offer is \$37.38, up \$0.63 from last Monday's \$36.75.

## Fund Implied Price (FIP)

Fund Implied Prices (FIP) began the week on Tuesday down \$0.40 to \$28.25. By Friday, however, the FIP was showing signs of strengthening as it moved up \$0.34 to \$28.86. Today's FIP is \$28.85, down a penny on the day, but up \$0.20 from last Monday's \$28.65. The latest FIP information can be found in the chart on page 4.

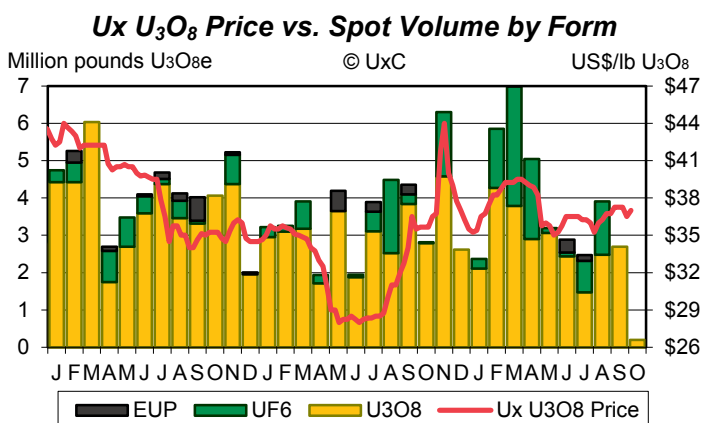
## U<sub>3</sub>O<sub>8</sub> Futures Market

The CME Group futures market for uranium remained quiet to finish the last week of September as no new contracts were booked. Pricing was a different story, however, as the strip dipped an average of \$0.27 throughout the week. For the latest futures market prices, please refer to the table on page 7.

UxC Market Statistics				
Monthly (Sep)	Spot		Term	
	Volume	# Deals	Volume	# Deals
U <sub>3</sub> O <sub>8</sub> e (million lbs)	2.7	24	W	7
Conv. (thousand kgU)	0	0	W	1
SWU (thousand SWU)	0	0	0	0
2015 Y-T-D				
	Spot		Term	
	Volume	# Deals	Volume	# Deals
U <sub>3</sub> O <sub>8</sub> e (million lbs)	36.4	217	>56.0	28
Conv. (thousand kgU)	>4,000	29	>6,600	9
SWU (thousand SWU)	>900	10	13,245	13

Key: N/A – Not available. W – Withheld due to client confidentiality.

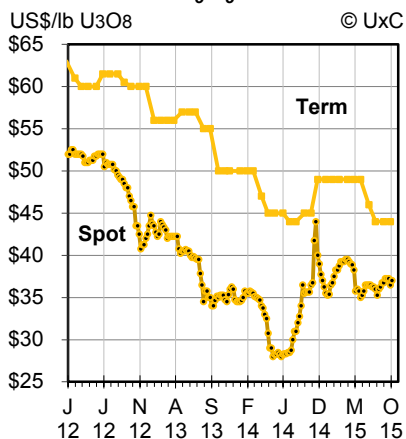
UxC Leading Price Indicators	
Three-month forward looking price indicators, with publication delayed one month. Readings as of Sept. 2015.	
Uranium (Range: -17 to +17)	-2 [up 1 point]
Conversion (Range: -16 to +16)	-2 [up 1 point]
Enrichment (Range: -18 to +18)	-9 [down 2 points]
<b>Platts Forward Uranium Indicator</b>	<b>\$35.75-\$36.50</b>
A forward one-week outlook.	As of 10/2/15 (US\$/lb)



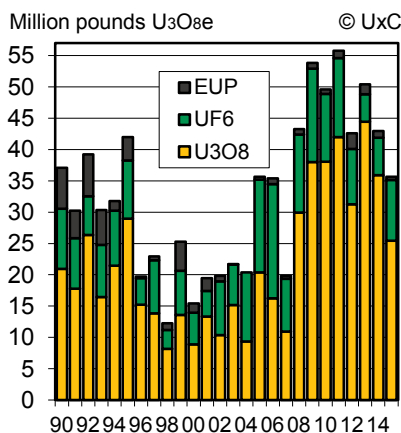
### Keeping Your Money Safe

Dad is from the old school, where you keep your money under the mattress -- only he kept his in the underwear drawer. One day I bought my dad an unusual personal safe, a can of spray paint with a false bottom, so he could keep his money in the workshop. Later I asked Mom if he was using it. "Oh, yes," she replied, "he put his money in it the same day." "No burglar would think to look on the work shelf!" I gloated. "They won't have to," my mom replied. "He keeps the paint can in his underwear drawer."

**Ux U<sub>3</sub>O<sub>8</sub> Prices**



**Annual Spot Uranium Volumes**



As there were no new contracts booked, the September monthly total remains unchanged at 600 contracts (150,000 pounds U<sub>3</sub>O<sub>8</sub>) along with the 2015 annum total at 2,948 contracts (737,000 pounds U<sub>3</sub>O<sub>8</sub>). Open interest also remained unchanged during the week and currently stands at 4,654 contracts (1,163,500 pounds U<sub>3</sub>O<sub>8</sub>).

no new demand or transactions reported over the past week. In the term market, the few

utilities that were evaluating offers for conversion or UF<sub>6</sub> have now made selections over the past month. These awards include a U.S. utility that was out for about 320,000 kgU as UF<sub>6</sub> per reload with delivery in 2018-2024 and a non-U.S. utility that was out for up to 1.5 million kgU of conversion services with delivery in 2017-2021. New demand also emerged in the form of a U.S. utility request. A non-U.S. utility is expected to submit a request for UF<sub>6</sub>/EUP.

**Uranium Term Market**

The term market has been moderately active, and while no new demand is reported for the week, several utilities as well as other buyers concluded term awards over the past couple of weeks. A non-U.S. utility that was out for upwards of 1.1 million pounds U<sub>3</sub>O<sub>8</sub> with delivery in 2017-2022, with options for additional quantities has made its decision. A U.S. utility is evaluating offers involving about one million pounds U<sub>3</sub>O<sub>8</sub> with delivery over the 2017 to 2021 time period has made its selections. A U.S. utility that was evaluating offers for term UF<sub>6</sub> involving six reloads with deliveries spread over the 2018-2024 time period, with total volume of about 4.24 million pounds U<sub>3</sub>O<sub>8</sub> equivalent also made a decision. A non-U.S. utility is preparing its term request for UF<sub>6</sub>/EUP with delivery of five or six reloads starting in 2017.

**Conversion & UF<sub>6</sub>**

The spot market for conversion remains very limited with

**Ux Price Indicators (€ Equiv\*\*)**

<b>Weekly (10/5/15)</b> 1 US\$ = .89369€		
<b>Ux U<sub>3</sub>O<sub>8</sub> Price</b>	<b>\$37.00</b>	<b>€33.07</b>
<b>Mth-end (9/28/15)</b> 1 US\$ = .88960€		
<b>U<sub>3</sub>O<sub>8</sub></b>	Spot	<b>\$36.50</b> €32.47
	Long-Term	<b>\$44.00</b> €39.14
<b>Conversion</b>	NA Spot	<b>\$7.00</b> €6.23
	NA Term	<b>\$15.00</b> €13.34
	EU Spot	<b>\$7.50</b> €6.67
	EU Term	<b>\$16.00</b> €14.23
<b>UF<sub>6</sub> Spot</b>	NA Price	<b>\$99.00</b> €88.07
	NA Value*	<b>\$102.37</b> €91.06
	EU Value*	<b>\$102.87</b> €91.51
<b>SWU</b>	Spot	<b>\$62.00</b> €55.16
	Long-Term	<b>\$77.00</b> €68.50
<b>EUP</b>	NA Spot**	<b>\$1,432</b> €1,274
	NA Term**	<b>\$1,808</b> €1,608

**Enrichment & EUP**

Activity in the enrichment market remains low to moderate. No new spot demand or transactions are reported for the week. As noted above, a non-U.S. utility that was evaluating term enrichment offers involving up to 2.1 million SWU with delivery over the 2017-2022 time period. A U.S. utility is seeking offers for mid-term SWU delivery of just over half a million SWU with delivery in 2018-2019 is evaluating a second round of bids. A non-U.S. utility is still expected to enter the market seeking about five or six reloads.

**Ux Price Indicator Definitions**

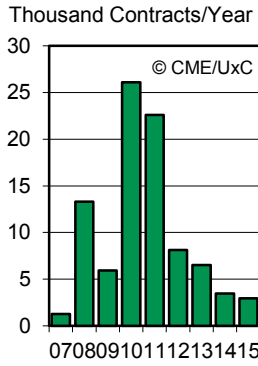
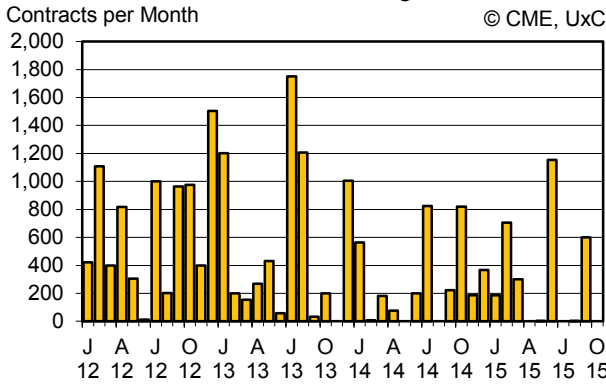
The Ux Spot Prices indicate, subject to the terms listed, the most competitive offers available for the respective product or service of which The Ux Consulting Company, LLC (UxC) is aware, taking into consideration information on bid prices for these products and services and the timing of bids and offers as well. The **Ux U<sub>3</sub>O<sub>8</sub> Price (Spot)** includes conditions for delivery timeframe (≤ 3 months), quantity (≥ 100,000 pounds), and origin considerations, and is published weekly. The **Ux LT U<sub>3</sub>O<sub>8</sub> Price (Long-Term)** includes conditions for escalation (from current quarter), delivery timeframe (≥ 24 months), and quantity flexibility (up to ±10%) considerations. The **Ux Conversion Prices** consider offers for delivery up to twelve months forward (Spot) and base-escalated long-term offers (LT) for multi-annual deliveries with delivery in North America (NA) or Europe (EU). The **Ux NA UF<sub>6</sub> Price** includes conditions for delivery timeframe (6 months), quantity (50-150,000 kgU), and delivery considerations. \*The **Ux NA and EU UF<sub>6</sub> Values** represent the sum of the component conversion and U<sub>3</sub>O<sub>8</sub> (multiplied by 2.61285) spot prices as discussed above and, therefore, do not necessarily represent the most competitive UF<sub>6</sub> spot offers available. The **Ux SWU Price (Spot)** considers spot offers for deliveries up to twelve months forward for other than Russian-origin SWU. The **Ux LT SWU Price (Long-Term)** reflects base-escalated long-term offers for multi-annual deliveries. \*\*The **Ux Spot and Term EUP Values** represent calculated prices per kgU of enriched uranium product based on a product assay of 4.50% and a tails assay of 0.30%, using spot and term Ux NA and appropriate spot and term price indicators and are provided for comparison purposes only. All prices, except for the weekly Ux U<sub>3</sub>O<sub>8</sub> Price, are published the last Monday of each month. (Units: U<sub>3</sub>O<sub>8</sub> = US\$ per pound, Conversion/UF<sub>6</sub>: US\$ per kgU, SWU: US\$ per SWU, EUP: US\$ per kgU) The Ux Prices represent neither an offer to sell nor a bid to buy the products or services listed. \*\*The Euro price equivalents are based on exchange rate estimates at the time of publication and are for comparison purposes only.

The Platts Forward Uranium Indicator price range belongs to Platts, a McGraw Hill Company, and is published with permission. Definitions of these prices are available from their original source.

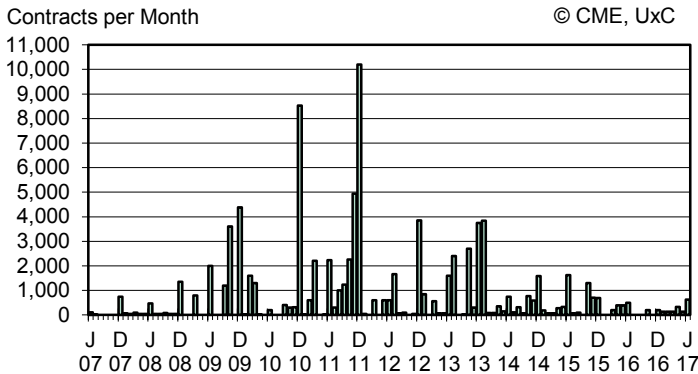
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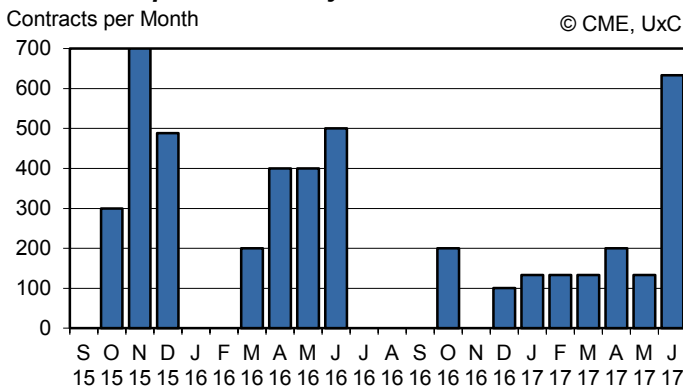
**CME/NYMEX UX Futures Activity**  
**Total Contracts by Transaction Month, by Transaction Year**



**Total Contracts by Settlement Month**



**Open Interest by Settlement Month**

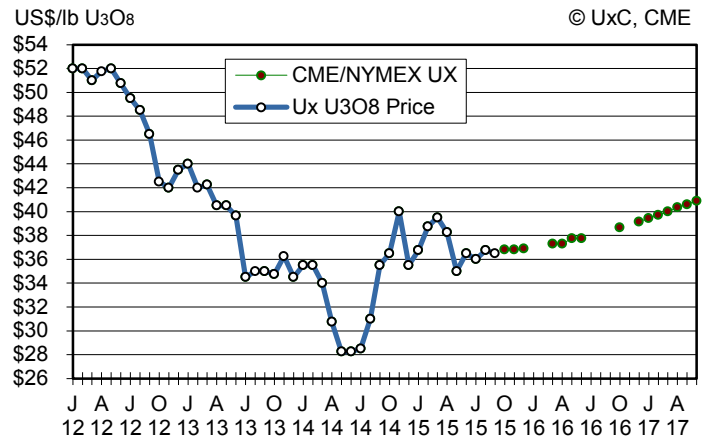


**CME Uranium U<sub>3</sub>O<sub>8</sub> (UX) Futures**

**Activity as of October 2, 2015**

Settlement	Price	Volume	Open
Sep 2014	\$35.50	75	N/A
Oct 2014	\$36.50	772	N/A
Nov 2014	\$40.00	584	N/A
Dec 2014	\$35.50	1,582	N/A
Jan 2015	\$36.75	186	N/A
Feb 2015	\$38.75	66	N/A
Mar 2015	\$39.50	69	N/A
Apr 2015	\$38.25	282	N/A
May 2015	\$35.00	332	N/A
Jun 2015	\$36.50	1,628	N/A
Jul 2015	\$36.00	66	N/A
Aug 2015	\$36.75	100	N/A
Oct 2015	\$36.80	1,300	300
Nov 2015	\$36.80	700	700
Dec 2015	\$36.90	695	488
Mar 2016	\$37.30	200	200
Apr 2016	\$37.30	400	400
May 2016	\$37.75	400	400
Jun 2016	\$37.75	500	500
Oct 2016	\$38.65	200	200
Dec 2016	\$39.15	202	101
Jan 2017	\$39.45	133	133
Feb 2017	\$39.70	133	133
Mar 2017	\$40.00	133	133
Apr 2017	\$40.35	333	200
May 2017	\$40.60	133	133
Jun 2017	\$40.90	633	633
<b>*From May 2007</b>	<b>Totals:</b>	<b>90,256*</b>	<b>4,654</b>

**Ux U<sub>3</sub>O<sub>8</sub> Price vs. CME/NYMEX Forward UX Price Curve**



**UxC Broker Average Price (BAP) Definition**

The **UxC BAP** (Broker Average Price), subject to the terms listed, is a calculated average mid-point of bid and offer prices as supplied to UxC by participating brokers. The participating brokers are Evolution Markets and Numerco Limited (the "Brokers"). Data posted by the Brokers are kept confidential and will not be published or made available independently. The Broker data are subject to verification by The Ux Consulting Company, LLC (UxC), which compiles and reports the UxC BAP. In order to have a sufficient number of data points and to represent submissions by all of the Brokers, the UxC BAP includes the best bids and offers reported over a three-month forward period. This period is consistent with the three-month delivery period for offers considered in the determination of the **Ux U<sub>3</sub>O<sub>8</sub> Price**. On a daily basis, the Brokers submit their best bids and offers over a forward three-month period through a secure system. From these postings, UxC separately calculates the UxC Broker Average (BA) Bid and the UxC Broker Average (BA) Offer prices. The UxC BAP is a simple mid-point average of the **UxC BA Bid** and **UxC BA Offer** prices. Other Broker data collected include lot volume on a per offer basis. The UxC BAP is published on a daily basis and is made available to subscribers through email updates and UxC's Subscriber Services website.

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**UxC Broker Average Price (BAP) Definition**

