

# NUCLEAR MARKET REVIEW

The Source for Uranium Prices & Industry News Since 1968

A TradeTech publication

<http://www.uranium.info>

## The Market

### MARKET WATCH

U<sub>3</sub>O<sub>8</sub> Weekly Spot Price Indicator

**\$65.00**

US\$/lb U<sub>3</sub>O<sub>8</sub> equivalent

▲ Up \$3.00

U<sub>3</sub>O<sub>8</sub> Transaction Value \*

**\$54.20**

U<sub>3</sub>O<sub>8</sub> Mid-Term Price Indicator \*

**\$64.00**

U<sub>3</sub>O<sub>8</sub> Long-Term Price Indicator \*

**\$67.00**

\* US\$/lb U<sub>3</sub>O<sub>8</sub> equivalent  
As of December 31, 2010

### The Market This Week . . .

- Eight transactions in the spot uranium market.
- No transactions or new demand in the term uranium market.
- Four transactions and no new demand in the conversion market.
- No transactions or new demand in the enrichment market.

raising offer prices with each successive transaction. As a result, TradeTech's Uranium Spot Price Indicator is up \$3.00 from the December 31 Exchange Value at \$65.00 per pound U<sub>3</sub>O<sub>8</sub>, reflecting prices in recently concluded transactions.

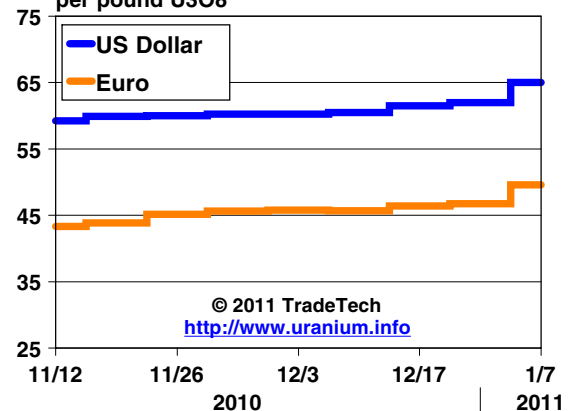
No new activity is reported this week in the term uranium market. One utility continues to evaluate offers for up to 1 million pounds U<sub>3</sub>O<sub>8</sub> for delivery in 2012

### Uranium

The spot uranium market was especially active during the first week of 2011, with eight transactions totaling over 1.7 million pounds U<sub>3</sub>O<sub>8</sub> equivalent reported. Utilities, traders, producers, and financial entities were all active in the market this week. About one-half of the quantity traded was in the form of UF<sub>6</sub>.

One non-US utility concluded a purchase of 400 thousand pounds U<sub>3</sub>O<sub>8</sub> for delivery in 2011. Buying interest from all sectors remains strong and uranium spot supply is extremely thin. Most sellers expect prices to increase further and are

TradeTech U<sub>3</sub>O<sub>8</sub> Weekly Spot Price Indicator  
per pound U<sub>3</sub>O<sub>8</sub>



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## The Market

through 2016, and another 2.5 million pounds U<sub>3</sub>O<sub>8</sub> for delivery between 2017 and 2021. One non-US utility, seeking offers for long-term deliveries beginning in 2015 and beyond, is now evaluating offers. Term demand is expected to rise in the first half of 2011, with suppliers increasing their offer prices accordingly.

### Conversion

Four transactions are reported this week in the conversion market, which total more than 500 tU of conversion or conversion contained in UF<sub>6</sub>.

Several utilities continue to evaluate offers for conversion or conversion services contained in UF<sub>6</sub>. One non-US entity has requested offers for 100 tU of conversion contained in UF<sub>6</sub>. A US utility is seeking 200 tU for delivery in 2011-2012, and up to 425 tU of conversion or conversion contained in UF<sub>6</sub> for delivery in 2015 and beyond. Another non-US utility is

evaluating offers for 1,700 tU of conversion for delivery between 2010 and 2014.

### Enrichment

No new demand or transactions are reported this week in the enrichment market.

One US utility is seeking offers for long-term supply beginning after 2013. One utility is seeking 400 thousand SWU for delivery beginning in 2011.

## Events

Jan 26

### Nuclear Fuel Supply Forum

W Washington DC Hotel  
Washington, DC, USA

<http://www.nei.org/newsandevents/conferencesandmeetings>

Feb 7-10

### Mining Indaba

Cape Town Int'l Convention Centre  
Cape Town, South Africa

<http://www.miningindaba.com>

Feb 16-18

### Platts 7<sup>th</sup> Annual Nuclear Energy

Marriott Bethesda North  
Bethesda, Maryland, USA

<http://www.platts.com/ConferenceDetail/2011/pc109/index>

Feb 27-Mar 3

### WM 2011

Phoenix Convention Center  
Phoenix, AZ, USA

<http://www.wmsym.org>

Apr 5-7

### World Nuclear Fuel Cycle

Swissotel Chicago  
Chicago, Illinois, USA

<http://www.wnfc.info>

May 12-13

### 7<sup>th</sup> Annual China Nuclear Energy Congress

Marriott Beijing  
Beijing, China

<http://www.chinadecisionmakers.com/cnec>

Jun 5-7

### WNFM 38<sup>th</sup> Annual Meeting

Barcelo Renacimiento Hotel  
Seville, Spain

<http://www.wnfm.com>

For more events, visit:

<http://www.uranium.info>

# The News

## **Energy Fuels Gains Radioactive Materials License for Piñon Ridge Mill**

Toronto-based Energy Fuels Inc. has been granted approval by the Colorado Department of Public Health and Environment (CDPHE) of a Radioactive Materials License for the Piñon Ridge uranium mill to be built in western Montrose County, Colorado.

“The license approval is the most significant hurdle to be completed before Energy Fuels is allowed to build and operate the first conventional uranium mill to be constructed in the US in 30 years,” a January 6 company statement said.

Energy Fuels has 60 days to review the CDPHE decision, and the license, and to decide whether to request a formal hearing on the license. If the company does not request a hearing, the Department’s license approval becomes final. That final license approval could potentially be appealed through an appellate process that uses the existing record to review CDPHE’s decision on the license.

Energy Fuels has two fully permitted nearby uranium mines, the Energy Queen and the Whirlwind, which are currently on a care and maintenance program. The targeted production rate from these mines is about 450 tons per day and these mines will be the

primary source of uranium/vanadium ore for the new mill. The mill is expected to produce at a rate of 500 tons per day with more than 40 years of mill feed available. It will produce about 850,000 pounds  $U_3O_8$  and 3.7 million pounds  $V_2O_5$  annually.

In anticipation of a positive decision, the company has started consolidation of certain known mines and deposits in the area and is in discussions with other parties to acquire additional properties or arrange toll milling agreements for their ore.

## **URI Options South Texas Uranium Property for Exploration**

Uranium Resources, Inc. (URI) has completed an agreement to explore 53,500 acres in Kenedy County, Texas, for three years, with an option to lease the acreage for uranium production.

Once the lease starts, it would have a primary term of eight years. The lease option agreement requires a minimum exploration obligation of 100 exploration wells or US\$1 million investment in the first year, an additional 200 exploration wells or \$1.5 million investment in the second year and, in the third year, an additional 200 exploration wells or \$2 million investment, according to URI.

URI announced in November 2010, it signed a non-binding letter of intent with Cameco subsidiary Cameco Resources for a three-phase exploration program that will be funded by Cameco Resources with an option for a production joint venture.

“While this is a green field exploration site, the property appears to be an excellent prospect with potential for one or more uranium deposits that can be produced by *in-situ* technology based on previous water sampling tests we completed from existing wells on the site,” said URI President and CEO Don Ewigleben.

## **CNNC Produces Its First Uranium in Niger**

China National Nuclear Corp. (CNNC) produced its first barrel of yellowcake from the Azelik mine in Niger on December 30.

The Azelik mine, in which CNNC subsidiary China Uranium Corp. holds a 37.2 percent interest, will be the first overseas uranium deposit developed by China once it goes into full operation this year. The mine is owned by Societe des Mines d’Azelik SA, a joint venture that includes CNNC and the government of Niger (33%), with the remainder held by a Chinese investment management company and a private mining and investment firm. The Niger project is expected to produce 700 tU (1.8 million pounds  $U_3O_8$ ) annually.

# The News

## NYNCO Blended Financial Value

**\$59.63**

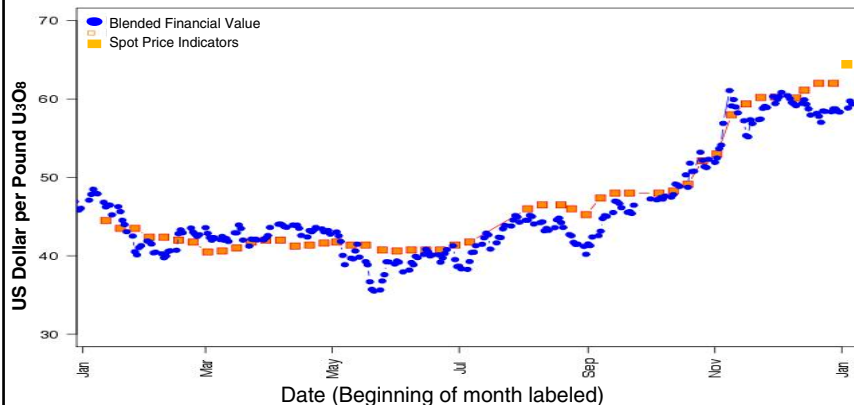
US\$/lb U<sub>3</sub>O<sub>8</sub> equivalent \*

▲ Up \$0.27\*\*

\* as of 1/7/10

\*\* from previous day's close as published by New York Nuclear Corp.

### Blended Financial Value and Spot Price Indicators through January 7, 2011



BFV Source: Uranium OnLine - Last Indicator: TradeTech Only

## STOCK WATCH

1-7-11

### Company

### Closing Price<sup>1</sup>

Company	Closing Price <sup>1</sup>	Change	% Change	Value
AREVA (PSE:CEI)	E36.18	▼ Dwn	0.9%	E0.32 <sup>2</sup>
Bannerman Resources Ltd. (ASX:BMN)	A\$0.675	▼ Dwn	4.3%	\$0.03
BHP Billiton Ltd. (ASX:BHP)	A\$44.62	▼ Dwn	1.4%	\$0.63
Cameco Corp. (TSX:CCO)	C\$37.81	▼ Dwn	6.2%	\$2.49
Denison Mines (TSX:DML)	C\$2.95	▼ Dwn	13.5%	\$0.46
Energy Fuels Inc. (TSX:EFR)	C\$1.04	▲ Up	16.9%	\$0.15
Energy Resources of Australia (ASX:ERA)	A\$11.50	▲ Up	3.3%	\$0.37
First Uranium Corp. (TSX:FIU)	C\$1.30	▼ Dwn	3.0%	\$0.04
Niger Uranium Ltd. (LSE:URU)	p7.88	▼ Dwn	1.5%	p0.12
Paladin Energy Ltd. (ASX:PDN)	A\$5.02	▲ Up	1.8%	\$0.09
Pele Mountain Resources Inc. (TSX:GEM)	C\$0.54	▲ Up	66.2%	\$0.215
Powertech Uranium Corp. (TSX:PWE)	C\$0.35	▲ Up	14.8%	\$0.045
Rio Tinto plc (LSE:RIO.L)	p4,426.50	▼ Dwn	1.3%	p60.00
Strathmore Minerals Corp. (TSX:STM)	C\$1.25	▼ Dwn	2.3%	\$0.03
Toro Energy Limited (ASX:TOE)	A\$0.155	▼ Dwn	3.1%	\$0.005
Ur-Energy Inc. (NYSE-Alt:URG)	US\$2.61	▼ Dwn	12.7%	\$0.38
Uranerz Energy Corp. (NYSE-Alt:URZ)	US\$3.74	▼ Dwn	6.3%	\$0.25
Uranium Energy Corp. (NYSE-Alt:UEC)	US\$5.32	▼ Dwn	11.9%	\$0.72
Uranium One Inc. (TSX:UUU)	C\$4.53	▼ Dwn	4.8%	\$0.23
Uranium Participation Corp. (TSX:U)	C\$8.05	▲ Up	1.6%	\$0.13
Uranium Resources Inc. (NASDAQ:URRE)	US\$2.93	▼ Dwn	13.3%	\$0.45
USEC, Inc. (NYSE:USU)	US\$6.18	▲ Up	2.7%	\$0.16
WildHorse Energy (ASX:WHE)	A\$0.46	▼ Dwn	3.2%	\$0.015

<sup>1</sup> Stock Watch represents a random sample of nuclear and uranium industry companies traded publicly. Closing prices are gathered from sources believed to be accurate. TradeTech assumes no legal liability or responsibility for the accuracy of this information.

<sup>2</sup> Percent and value change from previous Friday's closing price.

### Financial News . . .

Czech power group **CEZ** has sold its 9.15% share in Romania's Cernavoda nuclear station to majority shareholder **Nuclearelectrica**, Romania's state-owned power company.

The shares were sold at nominal value to the state utility, according to a CEZ statement. CEZ announced plans to sell its stake in the two-unit Cernavoda facility in September 2010.

**EDF Group** has allocated 50% of **RTE** shares to its dedicated assets portfolio set aside to cover future nuclear plant decommissioning and downstream fuel cycle costs, the company reported on January 3.

This decision means that RTE, which owns and operates high-voltage power lines in France and cross border lines, will remain wholly owned by EDF. The financial impact of this allocation prevents EDF from having to provide for cash allocations of about E2.3 billion (US\$3 billion) to the dedicated asset portfolio by 2016, equivalent to 50% of RTE's net book value in EDF's consolidated accounts at the end of 2010.

**Van Eck Global** has changed the name of its nuclear energy exchange-traded fund (ETF) to **Market Vectors Uranium+Nuclear Energy ETF**.

The new name was selected to reflect the relative weight (about 39%) of the uranium mining sub-sector among the seven nuclear energy sub-sectors in the DAXglobal® Nuclear Energy Index. The Fund's ticker symbol, NLR, remains unchanged.

## The News

### **Uranerz Receives WDEQ Permit to Mine for Nichols Ranch U Project**

The Wyoming Department of Environmental Quality has issued the commercial Permit to Mine for Uranerz Energy Corp.'s Nichols Ranch *in-situ* recovery (ISR) uranium project within the state's Central Powder River Basin.

The project contains an estimated 5.5 million pounds U<sub>3</sub>O<sub>8</sub> and will serve as a platform to develop the company's other Powder River Basin projects through the permit amendment provisions of the regulatory process, according to a January 4 company statement.

The Permit to Mine, one of the first new permits issued by the WDEQ in nearly 20 years, grants the approval for Uranerz to construct and operate an ISR uranium mine. On the federal level, Uranerz will need the final Materials License from the US Nuclear Regulatory Commission (NRC) before construction can begin. The company received the draft NRC Materials License in November last year.

### **China Reveals Nuclear Power Expansion Program**

China this week announced new goals for its energy and power sectors over the next five years, as the nation strives to feed its growing economy and rapidly increasing energy demand.

Zhang Guobao, head of the National Energy Administration, said by 2015 China should add 38 GWe of nuclear power capacity and 140 GWe of hydropower capacity. That compares to about 10 GWe and 200 GWe at the end of 2010, respectively, out of total capacity of 950 GWe.

China is focused on significant expansion of its nuclear power industry as it moves away from coal-fired plants in an effort to curb pollution. Presently, the country has 12 commercial reactors with about 10 GWe of generation capacity.

China National Nuclear Corp. (CNNC) reported this week that Chinese scientists have developed and tested spent fuel reprocessing technology at its No. 404 Factory in the Gobi desert within the remote province of Gansu.

### **New Reactor Construction in China**

CNNC also reported this week it has received government approval to add two units at the Tianwan nuclear station in Jiangsu Province and to build a plant in Liaoning Province to meet rising demand.

Construction of Tianwan 3 and 4 (1,000 MWe PWRs) is scheduled to start in December 2012 and August 2013, respectively. CNNC will start building the first reactor (1,000 MWe PWR) at Xudabao plant in Liaoning in September this year.

In addition, the state-controlled entity has started construction of a third unit at the Fuqing nuclear station in coastal Fujian Province, which is slated for commercial service in July 2015. Fuqing 1 and 2, which are also under construction, are scheduled for operation in November 2013 and 2014.

### **NRC Issues Final SEIS for Palo Verde License Renewal Application**

The US Nuclear Regulatory Commission's (NRC) final supplemental environmental impact statement for the Palo Verde nuclear station in Arizona has concluded there are no environmental impacts that would preclude license renewal for Units 1, 2, and 3.

Arizona Public Service Company submitted an application to the NRC in December 2008 to extend the licenses by 20 years for each unit. Under NRC regulations, the original operating license for a nuclear plant has a term of 40 years. The current operating licenses for Palo Verde 1, 2 and 3 expire on June 1, 2025, April 24, 2026, and November 25, 2027, respectively.

The NRC is also finalizing its Safety Evaluation Report (SER) on the Palo Verde license renewal. The agency's Advisory Committee on Reactor Safeguards will review the SER and make its recommendations before the agency makes a final decision on whether to renew the operating license.

## The News

### **Spain Approves Capacity Increase for Almaraz 1 & 2**

The Spanish government has reportedly granted power companies permission to expand the capacity of two reactors, reversing previous opposition to nuclear power as the country struggles to pay for its electricity.

Units 1 and 2 at the Almaraz nuclear station in the western region of Extremadura will each see their capacity boosted by 70 MWe to 1,050 MWe, daily newspaper *Expansion* reported this week.

### **India Delays Nuclear Turbine Joint Venture**

Bharat Heavy Electricals Limited's (BHEL) planned three-way joint venture to build nuclear turbines with French energy company Alstom has been delayed as the Indian government has objected to the involvement of a state-run nuclear power producer as a partner and cited a conflict of interest.

The Department of Atomic Energy (DAE) reportedly contends that Nuclear Power Corp. of India Ltd. (NPCIL) cannot be both a buyer and supplier of nuclear turbines, as this could damage price discovery. The move is a setback to the venture that has been in development for nearly a year and has secured commitments to build turbines for 10 reactors.

While BHEL intends to seek board approval for the joint venture, NPCIL will now need the DAE's permission to move forward.

### **India Inaugurates Tarapur Reprocessing Facility**

Indian Prime Minister Manmohan Singh dedicated on January 7, a new reprocessing plant at the Bhabha Atomic Research Center that will use spent fuel from the country's nuclear plants for fast breeder reactors.

Singh said the reprocessing plant at Tarapur, in the western state of Maharashtra, was essential for the country's closed fuel cycle three-stage nuclear program. The plant is essential for the transition from the first stage to the second stage of the program for building fast breeder reactors to produce sustainable and clean energy for the country, he added.

### **France Interested in Building Nuclear Plant in Turkey**

French companies including AREVA, GDF, and EDF have reportedly submitted a bid to build a nuclear plant in Turkey.

Turkish Energy Minister Taner Yildiz confirmed the country is evaluating the French bid and is expected to continue to prioritize negotiations with rival Japanese bidders, Turkish daily newspaper *Sabah* reported on January 4.

Government officials in Turkey are in talks with Japan for a nuclear plant on the northern Black Sea coast. In May 2010, Turkey signed a US\$20 billion deal with Russia for construction of the West Asian nation's first

nuclear plant on the southern Mediterranean coast at Akkuyu, which is scheduled for operation in 2018.

### **Fission Begins Winter Exploration at Waterbury Lake Project**

Fission Energy Corp. and its limited partner Korea Waterbury Uranium Limited Partnership have started their largest winter exploration program, including 22,000 meters of drilling with three drills, at the flagship Waterbury Lake uranium project in the eastern Athabasca Basin of Saskatchewan.

The primary focus of the C\$7.9 million (US\$7.9 million) program will be to build on the success of the J-Zone unconformity high-grade uranium discovery made in 2010, in addition to continued drilling at the nearby J-East and Highland targets.

In addition, exploration drilling is planned at newly identified targets to the west of the J-Zone along the prospective Discovery Bay East-West Corridor, and at Oban, which parallels the Discovery Bay Corridor to the north, and exhibits a similar east-west trending magnetic low region with strong electromagnetic conductors.

# Uranium Market Data

## Monthly Market Values

NUEXCO Values	12/31/10	Units
Exchange Value	\$62.00	US\$ / lb U <sub>3</sub> O <sub>8</sub>
UF <sub>6</sub> Value	\$173.00	US\$ / kgU as UF <sub>6</sub>
Loan Rate	2.00	Percent / annum
Conversion Value		
• North American	\$12.50	US\$ / kgU as UF <sub>6</sub>
• European	\$12.00	US\$ / kgU as UF <sub>6</sub>
SWU Value		
• Unrestricted	\$155.00	US\$ / SWU
• Restricted	\$155.00	US\$ / SWU
Transaction Value	\$54.20	US\$ / lb U <sub>3</sub> O <sub>8</sub>
Mid-Term U <sub>3</sub> O <sub>8</sub>	\$64.00	US\$ / lb U <sub>3</sub> O <sub>8</sub>
Long-Term U <sub>3</sub> O <sub>8</sub>	\$67.00	US\$ / lb U <sub>3</sub> O <sub>8</sub>
Long-Term Conversion		
• North American	\$15.00	US\$ / kgU as UF <sub>6</sub>
• European	\$15.00	US\$ / kgU as UF <sub>6</sub>
Long-Term SWU	\$158.00	US\$ / SWU

### DEFINITIONS\*

TradeTech's Exchange Value, UF<sub>6</sub> Value, Conversion Values and SWU Values reflect the company's judgment of the price at which spot and near-term transactions for significant quantities of natural uranium concentrates (U<sub>3</sub>O<sub>8</sub>), natural uranium hexafluoride (UF<sub>6</sub>), or conversion or enrichment services could be concluded as of the last day of the month. The Loan Rate is TradeTech's judgment of the annual interest rate at which uranium loans could be concluded as of the last day of the month. The Transaction Value is a weighted average price of recent natural uranium sales transactions. The Mid-Term U<sub>3</sub>O<sub>8</sub> Price Indicator is our judgment of the base price at which transactions for mid-term or intermediate delivery of natural uranium concentrates could be concluded as of the last day of the month, for transactions in which the price at the time of delivery would be an escalation of the base price from a previous point in time. The Long-Term Price Indicators for U<sub>3</sub>O<sub>8</sub>, Conversion, or SWU are TradeTech's judgment of the base price at which transactions for long-term delivery of that product or service could be concluded as of the last day of the month, for transactions in which the price at the time of delivery would be an escalation of the base price from a previous point in time. The U<sub>3</sub>O<sub>8</sub> Weekly Spot Price Indicator is our judgment of the price at which spot transactions for significant quantities of natural uranium concentrates could be concluded as of the end of each Friday.

The Restricted SWU Value applies to all services delivered in the United States and European Union. The Unrestricted SWU Value applies to all enrichment services delivered outside the United States and European Union.

All Market Values are expressed in US\$ and are based on:

- Data from recently completed transactions.
- Data from pending transactions.
- Firm bids to buy or borrow, and firm offers to sell or lend.
- Prices purchasers or rates borrowers have expressed a willingness to pay, but for which we are not aware of firm bids to buy or borrow and prices sellers or rates lenders have expressed a willingness to accept, but for which we are not aware of firm offers to sell or lend.

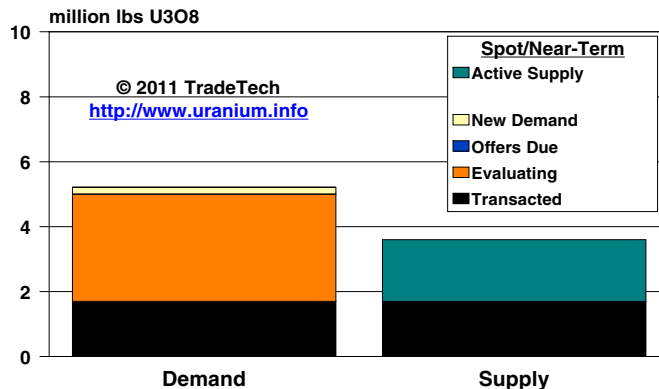
In the determination of all Market Values, we do not consider:

- Prices associated with deliveries under old or renegotiated contracts, or other than arm's-length transactions.
- Charges for transportation other than that customarily provided by suppliers.
- Prices of services or materials delivered under long-term contracts with primary suppliers.

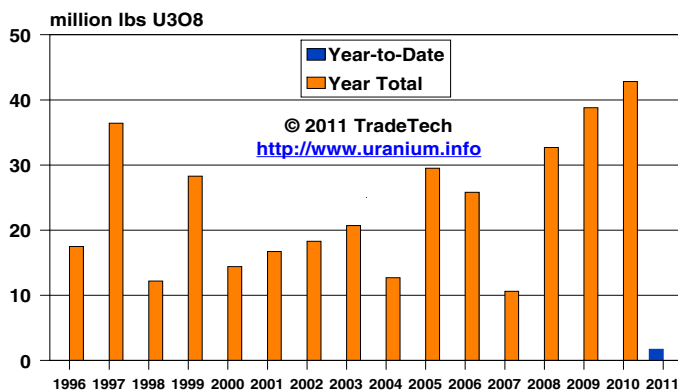
\* Complete definitions, including derivations and comments, can be found on our Web site at: <http://www.uranium.info>.

■ All rights to the names NUEXCO Market Values; NUEXCO Exchange Value, NUEXCO UF<sub>6</sub> Value; NUEXCO Conversion Value, NUEXCO SWU Value and NUEXCO Loan Rate are the property of TradeTech, LLC, Denver, Colorado, USA.

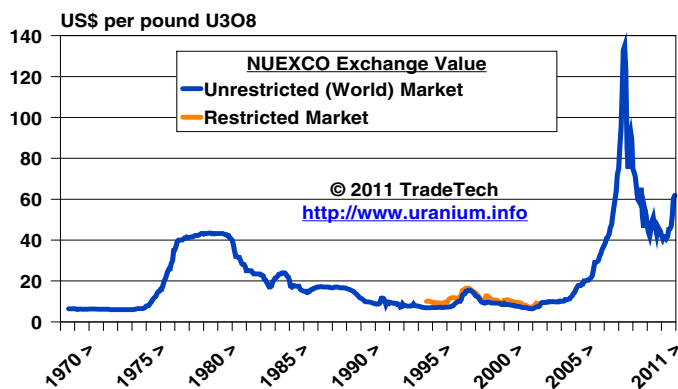
## Uranium Market Activity



## Uranium Transaction Volume



## Uranium Spot Price



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