



Translation from Romanian

## The Price of Uranium Evolution in the International Market

### 1. The price situation of the Agreement no. 434/04.09.2014 concluded with the National Uranium Company (*Compania Națională a Uraniului*)

The uranium market, like any other commodities market, has a history influenced by supply and demand and by geopolitical conditions. Uranium is a raw material that is traded globally, both in the spot market and through long-term contracts. The market is dominated by long-term contracts, which amounts to 85% of the total transactions. Price is monitored by international agencies as UxC, TradeTech, Nukem.

In Europe, transactions are monitored by EURATOM Supply Agency (ESA), which aims to regulate and supervise the nuclear fuel supply for producers in the European Union under the EURATOM Treaty. To achieve this, ESA has developed and implemented policies based on non-discriminatory access for EU consumers both to the uranium ores and nuclear fuel.

SN Nuclearelectrica SA ("SNN") gives his point of view on the purchase price for uranium dioxide ("UO<sub>2</sub>") powder by contracts signed with the National Uranium Company ("CNU") between 2011 and 2015. **During this period, the CNU price paid by SNN was in accordance with the contracts negotiated and concluded between the parties.**

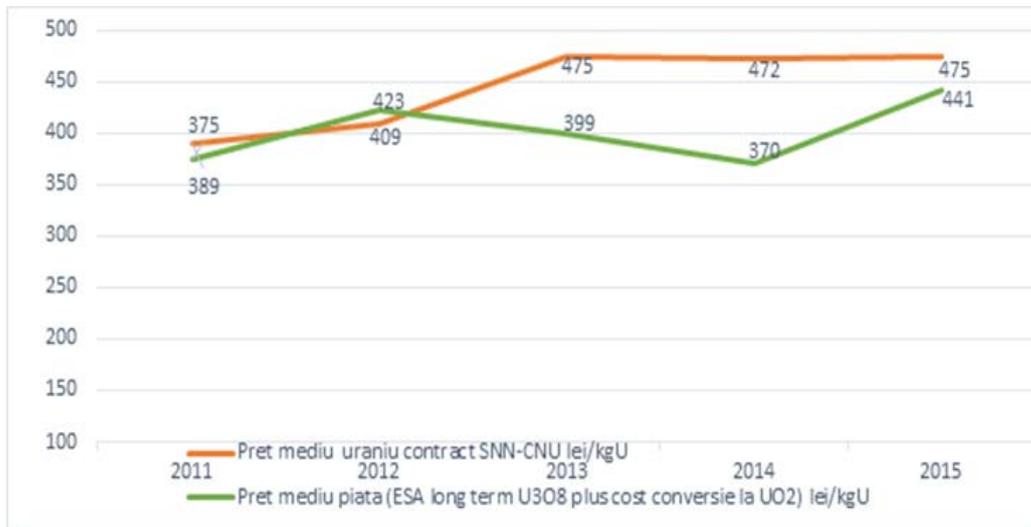
**Prices set in the contracts are market prices** as it can be determined by analysing the market price references published in annual reports of the Euratom Supply Agency ("ESA"). **Contracts for delivery of uranium in the European Union are tripartite, being signed by the seller, the buyer and ESA.**

SNN purchased uranium dioxide (UO<sub>2</sub>) from CNU. ESA publishes reference price for the product U<sub>3</sub>O<sub>8</sub> (uranium octoxide). UO<sub>2</sub> is obtained by processing U<sub>3</sub>O<sub>8</sub>, so that the process involves conversion costs which can only be estimated, depending on the efficiency and productivity of each producer.

**Starting from the average prices related to long-term contracts published by ESA to which the conversion costs estimated for U<sub>3</sub>O<sub>8</sub> in UO<sub>2</sub> were added, results that the prices of contracts between SNN and CNU are market prices.**

Data presented by ESA for 2015 reveals that in the case of long-term price indices, i.e. related to long-term contracts like the one signed with CNU, 75% of the prices are within a range of about +/- 24% around the average price.

Thus, in the period 2011-2015, the average price of UO<sub>2</sub> purchased by SNN from CNU increased by 22%, while the average market price determined by SNN analysis using the data published by ESA, increased by 18%.



## 2. Recent evolution of the uranium price (spot market and long-term contracts)

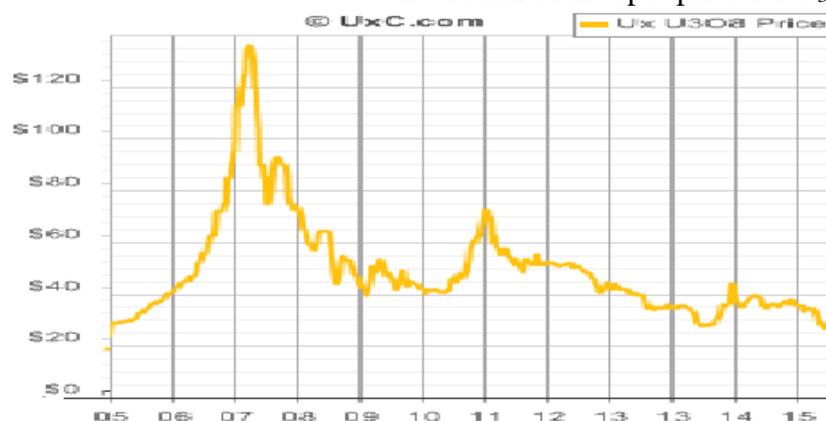
In 2016, the uranium market had the worst annual start in the last 10 years. The price of uranium octoxide (U<sub>3</sub>O<sub>8</sub>) on the spot market fell by more than 25%, being the lowest value registered since May 2, 2005.

In the first quarter of 2016, the monthly price reported by UxC in the spot market fell, reaching to \$ 29.15/lb (equivalent to \$ 64.13/kg or €57.71/kg) U<sub>3</sub>O<sub>8</sub> in late January. This price decreased by almost 15% compared to the third quarter of 2015 and by 26% compared to the first quarter of 2014.

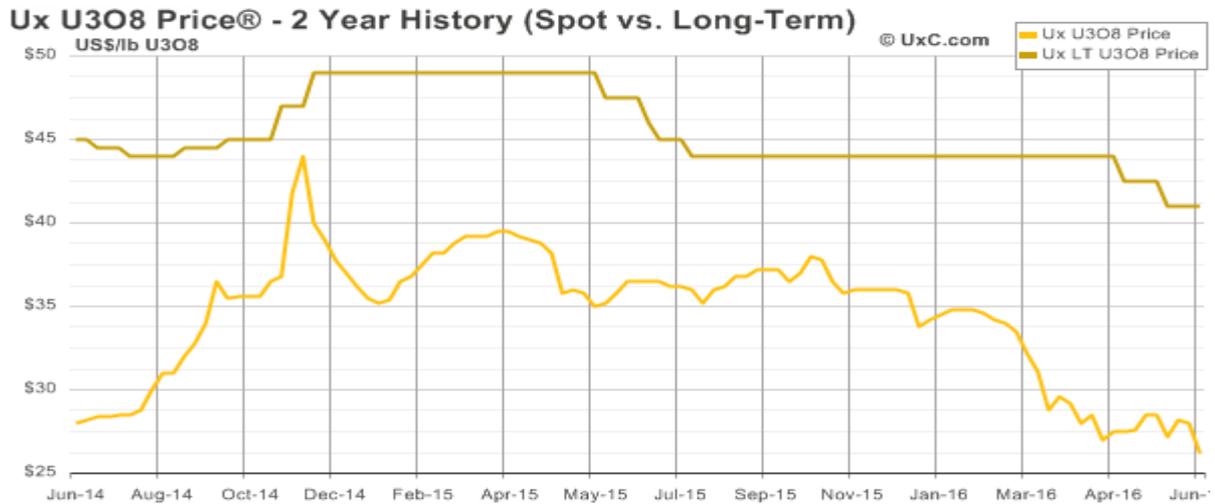
Starting in April 2016, the UxC price for the uranium procurement long-term contracts recorded a decrease of more than 10% compared to the price recorded in the last quarter of 2015.

The price for U<sub>3</sub>O<sub>8</sub> according to ESA MAC3 for 2015 (price indicator calculated by ESA reflecting an average value of the new and already existing multiannual contracts – updated during the year) was 37.78\$/lb (equivalent to 83.11\$/kg or 74.8€/kg) U<sub>3</sub>O<sub>8</sub> decreasing by 21% compared to the value recorded in 2014, namely 47.8 \$/lb (equivalent to 105.16 \$/kg or 94.64€/kg) U<sub>3</sub>O<sub>8</sub>.

Evolution of the spot price for U<sub>3</sub>O<sub>8</sub> (2005-2015)



## Evolution of the spot price and long-term for U<sub>3</sub>O<sub>8</sub> (2014-2016)



### 3. Causes for uranium price fall

Haywood Company in Vancouver, Canada attributed the decrease in uranium prices to the following two factors:

- Absence of producers' uranium purchases due to the Japanese reactors closing following the Fukushima accident and because of the fact that production of uranium ore increased in most mines. Shutting down of Japanese reactors have created a surplus of about 120 million lb U<sub>3</sub>O<sub>8</sub> for Japanese manufacturers, which is one of the main reasons why uranium price has now reached rates so low. Besides, Germany and Switzerland have decided to shut down all reactors on their territory and the United States commissioned the last nuclear reactor more than 20 years ago;
- An over-supplied market that continues to make available for the purchasers increasingly higher amounts of raw material. In 2014, ore stocks accumulated by manufacturers amounted to 217,000 tonnes of uranium. This amount is sufficient to cover the operation for the next 3 years for the reactors now in operation, without requiring new acquisitions of raw material.

World Nuclear Association concluded that recent programs aimed to uranium deposits exploration have significantly contributed to increasing available Uranium resources worldwide, even in conditions where uranium ore market deteriorated after 2011.

Given the above, we see a continuous decline in the price of uranium due mainly to increased production of uranium and decreased demand (reducing the number of reactors in operation).