

TRAXYS RESPONSES to DOE'S RFI ON EXCESS URANIUM MANAGEMENT

Summary Statements based on Traxys' contracts and EIA Form 858 Filings:

1. Traxys is a primary, direct participant in the sale and introduction to market of the majority of DOE's excess uranium sales via a contractual relationship with Fluor B&W Portsmouth (FBP) to purchase and monetize all the UF6 it receives from DOE for services. Based on this unique position, Traxys is the only company that can factually comment and have actual transactional data on how, when and where the vast majority of DOE derived UF6 is introduced to the global marketplace. Data and commentary on any implied market impact resulting from DOE uranium sales from other sources can only be based on conjecture and speculation and not fact.
2. Since June 2011, Traxys has been the exclusive buyer of all UF6 provided to FBP by DOE in exchange for services. In 2011, Traxys purchased 1,250,000 kgU; in 2012, 1,600,000 kgU; in 2013, 2,400,000 kgU; and 2,055,000 kgU in 2014. In 2015 and 2016, Traxys has contracted to purchase 2,055,000/kgU per year, a quantity that represents approximately 75% of all planned DOE uranium sales in those years.
3. **Approximately 90% of the quantities contracted to be purchased by Traxys has now already been committed to be sold to utility customers under forward delivery contracts and NOT in the spot market.**
4. Traxys' marketing strategy for UF6 acquired from FBP has been **to sell the material in a market neutral, non-disruptive manner that minimizes the impact on the market.** Traxys has pursued this goal by striving to sell at least 50% of the DOE-supplied material acquired from FBP pursuant to and into forward delivery contracts, thereby minimizing the quantities entering the spot market. In addition, Traxys' goal is to sell at least 50% of such material to non-U.S. customers, which has further reduced the quantities entering the U.S. marketplace. **Traxys has consistently met these goals by selling at least 50% of such material under forward delivery contracts and 50% to non U.S. buyers and thus minimizing the material that actually enters the US market.** Summarized another way, this means that at least 50% of DOE-supplied UF6 is being held off the market and not introduced for several years, thus analysis based on a real time introduction of DOE uranium to the market based on transferred quantities is flawed.
5. A stable and predictable uranium market serves Traxys' commercial interests. Traxys' and its affiliates are investors and shareholders in two US uranium producers (both UPA members) and support them with financing and sales & marketing services, and thus **Traxys is incentivized to maintain a strong market that does not adversely impact its investments.**
6. In 2014, Traxys purchased a total of 3,188,000 kgU of conversion in UF6, which included 2,055,000 kgU of conversion in UF6 purchased from FBP, plus another 1,133,000 kgU of conversion purchased from the open market. **Traxys purchased an additional 55% above the conversion component of the material supplied by DOE to FBP.** Traxys is therefore buying additional quantities from the market above and beyond the material it is purchasing from FBP, offsetting significant portions of DOE-introduced quantities and providing additional demand that primary conversion producers may benefit from.

7. Of Traxys' total conversion in UF₆ sales contracted in 2014, only 831,000 kgU were sold in spot market transactions to US utilities. This means in 2014, no more than 40% of DOE-derived conversion was sold under spot contracts or in the US market. Based on these small amounts, changes in DOE supplied quantities will have a negligible effect on the market.
8. Approximately 90% of the conversion component expected to be included in DOE's proposed transfers to be acquired by Traxys from FBP in 2015 and 2016, has already been sold forward by Traxys under forward delivery contracts, leaving negligible quantities available to sell in any spot sales. As these quantities have been committed to forward delivery contracts already, these transfers by DOE will not result in significant additional quantities being sold into the spot market.

Responses to DOE Questions:

1. What factors should DOE consider in assessing whether transfers will have adverse material impacts?

The main factors that should be considered to effectively assess whether DOE transfers will have adverse material impacts should be:

- The volume of the material transferred by DOE every year compared to the size of the uranium, conversion and enrichment demand in the U.S and the duration of the contracts the material is being placed in.
- The volume of the material transferred by DOE every year compared to the volume of foreign sources of supply for uranium, conversion and enrichment.
- The market share in the U.S. of domestic sources of uranium, conversion and enrichment compared to the market share of foreign sources of supply.
- The volume of other secondary sources of supply for uranium, conversion and enrichment compared to the volume of material transferred by DOE.
- Whether the isolated effect of DOE transfers has an impact on uranium, conversion or enrichment prices, among the many factors that determine the relationship between supply and demand in any commodities markets
- Whether other macroeconomic factors have had a more significant influence on uranium, conversion and enrichment prices than the isolated effect of DOE transfers.
- The impact of an increase of other sources of supply (expansion of Kazakh production, the increase in additional enrichment capacity, the impact of enricher underfeeding) combined to a decrease in demand following the Fukushima incident.
- In case these transfers were suspended, whether the domestic uranium mining, conversion and enrichment industries would benefit from this new demand, that could also be covered by foreign sources of supply.

2. With respect to transfers from DOE's excess uranium inventory in calendar years 2012, 2013 and 2014, what have been the effects of transfers in uranium markets and the consequences for the domestic uranium mining, conversion and enrichment industries relative to other market factors?

Since 2012, total DOE inventory transfers have averaged 2,850 MTU as UF₆ annually, which represents 4% of global uranium supply, according to ERI estimates¹. DOE transfers are in the form of UF₆ which contains conversion. The size of the domestic conversion requirements is estimated at 18,000,000 kgU per year. This means DOE transfers represented 8.9%, 13.3% and 11.4% of yearly domestic conversion requirements respectively. It should also be noted that global primary conversion production in 2014 is estimated at 52,000,000 kgU.

US conversion needs are covered by all four of the world producers, as well as secondary sources. ConverDyn, the only domestic conversion supplier, is estimated to supply 25% of domestic conversion requirements every year. Its sales volume is impacted by the strong competition in a poorly diversified market, as well as the presence of different forms of secondary supply.

Total secondary supply of conversion in 2014 is estimated at approximately 16.5 million kgU as UF₆, which is more than five times the volume of DOE transfers. It is important to note that there are significant sources of secondary supply in addition to DOE UF₆ such as: available UF₆ from enricher underfeeding activities, natural UF₆ from the upgrade of depleted tails in Russia and the presence of the conversion component in LEU derived from down-blended HEU.

There is no absolute measure of the isolated effect that DOE material has on the domestic uranium mining, conversion and enrichment industries. In the event DOE inventory was withheld from the market, the domestic conversion industry would likely only benefit from an additional 500,000 to 600,000 kgU of conversion sales per year based on its current market share.

An assertion that the DOE uranium transfers negatively impact the long-term prices is inaccurate. In fact the long-term conversion price (\$16 per kgU as of December 30 2014, per UxC, the uranium price publishing firm) is near its record all-time high of \$17 per kg, and has been in this record high range since DOE first supplied FBP with UF₆ in June 2011. **The long-term conversion price has held at these record levels for the last 4 years** while the long-term uranium price and enrichment price each have fallen by 34% and 35% respectively, further demonstrating the strength of the long-term conversion market. This long-term conversion price stability has persisted despite the fact that spot conversion prices have ranged between \$11 and \$7 dollars. The spot conversion price has therefore no negative impact on the long-term conversion price. It would be inaccurate to state that DOE uranium transfers have had a material adverse impact on the uranium, conversion and enrichment prices.

3. What market effects and industry consequences could DOE expect from continued transfers at annual rates compared to the transfers described in the 2014 Secretarial Determination?

There is no absolute way to measure the isolated effect that DOE material has on the domestic uranium mining, conversion and enrichment industries. The DOE inventory could only be considered minimally responsible for a portion of the decline in market prices observed since the Fukushima event until the end of the first half of 2014.

¹ ERI "2014 Review of the Potential Impact of DOE Excess Uranium Inventory On the Commercial Markets"

The Secretarial Determination of May 2014 allowed DOE to continue its UF₆ transfers to FBP, which in turn allowed Traxys to introduce this material in the market. Despite the fact that the supply situation remained unchanged, uranium and conversion spot prices increased dramatically between May and November 2014; U₃O₈ spot price went from \$28.00 per lb to \$44.00 per lb, which represents an increase of more than 57% within six months; Conversion price increased as well from \$7.50 per kgU to \$8.50 per kgU.

This price movement despite the presence of DOE material in the market highlights the lack of impact that DOE transfers have in the spot and long-term prices, and the importance that other external factors can have. DOE transfers should not be held responsible for the decrease in uranium prices since 2011, the year when the Fukushima accident happened and which led to a decrease in global uranium, conversion and enrichment demand. Other factors such as the presence of other secondary supplies (significant enricher underfeeding) which are much greater in volume than DOE transfers should be studied more closely. Given the amount of other sources of secondary supply available, the impact of these other sources of material in the domestic uranium mining, conversion and enrichment industries is far greater than DOE transfers.

The amount of material transferred by DOE is very small compared to other sources of material, and it is unrealistic to believe that this had or will have a material adverse impact on domestic industries. Removing this material from the market would not have a significant impact on prices and would strongly affect the progress of DOE's cleanup services performed by FBP at the Portsmouth site.

4. Would transfers at a lower annual rate significantly change these effects, and if so, how?

The size of the domestic conversion requirements is estimated at 18,000,000 kgU per year. This means DOE transfers represented 8.9%, 13.3% and 11.4% of yearly domestic conversion requirements in 2012, 2013 and 2014 respectively. A reduction in DOE inventory releases could not cause the overall market conditions to change enough to make a significant difference in the health and status of the domestic industries.

As a significant portion of DOE derived uranium and conversion have already been placed under long term contract, transfers at a lower annual rate would not significantly change any potential impact on uranium, conversion and enrichment prices. Any reduction in this material from the market would not have a meaningful impact on prices either way.

5. Are there actions DOE could take other than altering the annual rate of transfers that would mitigate any negative effects on these industries?

To mitigate negative effects on the uranium mining, conversion and enrichment industries, DOE could:

- Implement quota regulations that limit the amount of secondary supply of UF₆ obtained from underfeeding that enrichers are able to sell in the US market annually. It is estimated that this source of supply represents over 10 million kgU per year, which is almost four times the size of DOE transfers every year. As enrichers do not regulate

supply to match demand, there is a negative impact via underfeeding that is transferred down the fuel cycle to other market participants, without moderation or regulation.

- Enable Traxys to continue performing its marketing strategy for DOE UF6 acquired from FBP at a steady, consistent rate. This would allow the introduction of DOE material in the market in a non-disruptive way, while continuing to provide funds for the FBP clean-up services at the Portsmouth site. Traxys' strategy has been to sell the material in a market neutral, non-disruptive manner that minimizes the impact on the market.

6. Are there actions DOE could take with respect to the transfers that would have positive effects on these industries?

Enable excess uranium sales over a longer time horizon.

7. Are there any anticipated changes in these markets that may significantly change how DOE transfers affect the domestic uranium industries?

There is no absolute way to measure the isolated effect that DOE material has on the domestic uranium mining, conversion and enrichment industries. Given the size of DOE transfers compared to other sources of primary and secondary supply, it would not be accurate to state that DOE transfers affect the domestic uranium industries. As seen in the second half of 2014, DOE transfers have no adverse impact when it comes to naturally improved market conditions, which are expected to continue with plant restarts in Japan and new builds in China, UAE and other expanding markets.

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