

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

CONVERDYN,	)	
	)	
Plaintiff,	)	
	)	
v.	)	No. 1:14-cv-1012 RW
	)	
ERNEST J. MONIZ and UNITED	)	
STATES DEPARTMENT OF ENERGY,	)	
	)	
Defendants,	)	
_____	)	

**ATTACHMENT 1**  
**DECLARATION OF ASHLEY DAVID HENDERSON**  
**DEFENDANTS' OPPOSITION TO PLAINTIFF'S**  
**MOTION FOR PRELIMINARY INJUNCTION**

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

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Plaintiff,	)	
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v.	)	No. 1:14-cv-1012 RW
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ERNEST J. MONIZ and UNITED	)	
STATES DEPARTMENT OF ENERGY,	)	
	)	
Defendants.	)	
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**DECLARATION OF ASHLEY DAVID HENDERSON**

I, Ashley David Henderson, hereby declare as follows:

1. I am the Acting Director in the Office of Uranium Management and Policy within the Office of Nuclear Energy at the Department of Energy in Washington, D.C. I have held this position since September 1, 2013. Prior to this I supported the previous Director from June 2012 until his retirement on August 31, 2013. Prior to that position, I was the Assistant Manager for Program Support at the Idaho Operations Office from October of 2006 to June of 2012. In my current position, I am responsible for interfacing with the commercial nuclear fuel cycle industries and coordinating the Department's uranium transactions. The staff in the Office of Nuclear Energy report to the Assistant Secretary for Nuclear Energy. One of my responsibilities is, on behalf of the Assistant Secretary for Nuclear Energy ("NE"), to prepare and coordinate recommendations regarding Secretarial Determinations pursuant to section 3112(d) of the USEC Privatization Act, for submission by the Assistant Secretary for Nuclear Energy through the Deputy Secretary to the Secretary of Energy ("the Secretary").

2. The information contained in this declaration is based upon my personal knowledge and information that I have obtained in my official capacity.

3. In order to prepare a recommendation for the May 15, 2014 Secretarial Determination for the Sale or Transfer of Uranium, I oversaw and assisted in the preparation of the "NE Analysis of the Potential Impacts of Planned DOE Uranium Transactions" conducted by expert staff in the Office of Nuclear Energy. This analysis was marked "OUO – Includes Business Proprietary Information from multiple sources." A redacted copy of the NE Analysis from DOE's files is attached as Exhibit 1-A to this Declaration.

4. In preparing the NE Analysis of the Potential Impacts of Planned DOE Uranium Transactions, NE staff considered information provided to DOE by several industry sources for its consideration. One presentation considered is titled: FBP Update Impacts of DOE Uranium Barter Program on U.S. Domestic Industry. This presentation was marked "FBP Business Proprietary". A redacted copy of this FBP presentation, with the additional marking "Released to DOE Version", from DOE's files is attached as Exhibit 1-B.

5. I subsequently assisted in the preparation of the Memorandum dated May 12, 2014 and transmitted from the Assistant Secretary for Nuclear Energy through the Deputy Secretary to the Secretary with the subject: Approve the Secretarial Determination Covering Proposed Transfers of Excess Depleted, Natural, Off-specification and Low-Enriched Uranium over the Period 2014 through 2033 ("May 12, 2014 Memorandum"). The May 12, 2014 Memorandum transmitted the proposed Secretarial Determination subsequently signed by the Secretary (Plaintiff's Exhibit M to ConverDyn's Motion for a Preliminary Injunction), and also included as an attachment the NE Analysis described in paragraph 3 above. A copy of the report titled "2014 Review of the Potential Impact of DOE Excess Uranium Inventory On the Commercial Markets," conducted for the Department by Energy Resources International, Inc, (Plaintiff's Exhibit B to ConverDyn's Motion for a Preliminary Injunction), was also provided to

the Secretary separately as background material. The recommended action set forth in the May 12, 2014 Memorandum was approved by the Secretary on May 14, 2014. A copy of the approved May 12, 2014 Memorandum from DOE's files is attached as Exhibit 1-C.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: July 7, 2014



Ashley David Henderson

Acting Director,  
Office of Uranium Management and Policy,  
Office of Nuclear Energy  
United States Department of Energy

**Declaration of Ashley David Henderson  
Exhibit 1-A**

*NE Analysis of the Potential Impacts of Planned DOE Uranium  
Transactions (Redacted Version)*

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**NE Analysis of the Potential Impacts of Planned DOE Uranium Transactions**

**Background**

Over the last several years, the Department has engaged in transfers of its excess uranium inventory to fund work in support of NNSA and EM programs. The Department has broad authority under the Atomic Energy Act of 1954, as amended, to transfer, sell, acquire and dispose of depleted, natural and enriched uranium, and also to barter its uranium for payment of services to support Departmental programs and missions. While the Department maintains these general authorities, section 3112(d) of the USEC Privatization Act places additional requirements on transfers or sales of natural and enriched uranium from the Department's inventory, namely: 1) the President must have determined that material intended to be transferred is not necessary for national security needs; 2) the Secretary must determine that the transfer or sale will not have an adverse material impact on the domestic uranium mining, conversion or enrichment industries, taking into account the sales of uranium under the Russian Highly Enriched Uranium Agreement and the Suspension Agreement (Secretarial Determination); and 3) the Secretary must receive fair market value for the material. Sales or transfers subject to section 3112(d) require a Secretarial Determination that these requirements have been met. Sales or transfers of depleted uranium are not constrained by these requirements, nor are sales or transfers of natural or enriched uranium for national security purposes as provided in section 3112(e).

In addition to these statutory authorities and requirements, the Department has internal policies and guidelines concerning sales and transfers of excess uranium to minimize the impacts on the domestic uranium industry. In 2008, then-Secretary Bodman issued the "Policy Statement on Management of the Department of Energy's Excess Uranium Inventory" (Policy Statement), which was followed in December by the Department's "*Excess Uranium Inventory Management Plan*" (2008 Plan), which provided further detail regarding the Department's inventory of excess uranium and plans for or under consideration for the disposition of its excess uranium. The Policy Statement and 2008 Plan recited the Department's guideline of keeping its uranium transfers within 10 percent of annual domestic nuclear power plant fuel requirements, except where special circumstances necessitate transfers above that amount to support Departmental needs or objectives. The Department issued the 2013 "*Excess Uranium Inventory Management Plan*" (2013 Plan) to replace the 2008 Plan. The 2013 Plan identified uranium inventories that have entered the uranium market since the 2008 Plan and those anticipated to potentially enter the market through the end of Calendar Year 2018.

Based on experience gained since the issuance of the 2008 Policy Statement and Plan, including in particular the market impact analysis that supported the May 15, 2012 Secretarial Determination (the May 2012 Determination), the Department has determined it can meet its statutory and policy objectives in regard to DOE uranium sales or transfers without an established guideline. In addition, as discussed below, decisions to introduce uranium into the market pursuant to section 3112(d) must be reviewed every two years. Accordingly, the 10 percent guideline is no longer used.

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May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552), exemption number and category: 5. Privileged Information  
Department of Energy Review required before public release

Name/Org: A. David Henderson Date: 5/8/2014

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Section 306 of the Consolidated Appropriations Act, 2014 (Public Law No. 113-76) affects a Secretarial Determination by providing that any determination by the Secretary pursuant to section 3112(d), including prior determinations, are valid for no more than two calendar years subsequent to such determination. There are prior Secretarial Determinations impacted by this recent law: the 2005, 2008, and 2012 Secretarial Determinations approving the transfer of LEU to DOE contractors responsible for down-blending surplus HEU to LEU for use by NNSA in support of the American Fuel Supply Program (formerly known as the Reliable Fuel Supply Program) and the project currently referred to as the Mixed Oxide Fuel (MOX) LEU Backup Inventory Project.

As described above the Department is required under section 3112(d) of the USEC Privatization Act to analyze the market impacts only for the EM GDP Cleanup Program and the NNSA Down-blending Contracts (in order to meet the requirements of section 306 of the Consolidated Appropriations Act, 2014). The Department contracted with Energy Resources International, Inc. (ERI), an experienced and well-regarded nuclear fuel consulting firm, to assess the potential impact on the domestic uranium mining, conversion and enrichment industries from the transfers of uranium.

**ERI Analysis/ Report Summary**

To ensure that this requested Secretarial Determination is fully informed, the Office of Nuclear Energy (NE) tasked Energy Resources International, Inc. (ERI), an experienced and well-regarded nuclear fuel consulting firm, to assess the potential impact on the domestic uranium mining, conversion and enrichment industries from the transfers or sales of uranium being considered. The ERI analysis allows NE to estimate the potential quantitative impact of DOE actions on the markets, to understand where industries positions lie, and to formulate a recommendation for the Secretary.

While NE tasked ERI to use methodology similar to that used in past analyses, the analysis was to be supplemented, as needed, to give a full and accurate picture of the industry beyond simply impact on market prices. ERI clearly identified the three categories of DOE uranium inventory within the scope of its analysis: 1) historical DOE transfers, some of which will continue to displace commercial supply in the future until used in a reactor; 2) ongoing inventory transfers by EM and NNSA in exchange for services; and 3) proposed transfers of DOE inventory. As the current NE staff were not involved in the previous analyses and Secretarial Determinations, it was important to them that the scope and breadth of ERI considerations (e.g. employment, sales volumes, etc.) were clear and well documented.

The following is a summary of the findings from ERI's analysis. ERI's full summary can be found in Section 6 of their report.

- The global uranium, conversion and enrichment industries are all in a state of considerable over-supply. While long-term prospects for nuclear power growth

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and subsequent growth in fuel supply are generally viewed as positive, particularly for the uranium market, the amount of time it will take to recover from the post-Fukushima-driven state of the current markets is unclear.

- During the period from 2014 to 2033, the total DOE inventory entering market equals more than 49,000 MTU as UF<sub>6</sub>, which is roughly equivalent to 129 million pounds of U<sub>3</sub>O<sub>8</sub>. A total of 9.7 million SWU will enter the market during the period 2014 to 2023. No additional equivalent SWU are identified to enter the market after 2023. The DOE inventory entering the commercial markets over the next ten years (2014 through 2023) averages nearly 2,850 MTU as UF<sub>6</sub>, equivalent to 7.4 million pounds U<sub>3</sub>O<sub>8</sub> per year. This is equivalent to approximately 15% of annual U.S. uranium requirements and 15% of U.S. conversion requirements. During the subsequent ten years (2024-2033) the DOE inventory entering the commercial uranium market declines to an average equivalent of 5.5 million pounds per year, or nearly 12% of U.S. uranium requirements. The equivalent enrichment services contained in DOE inventory entering the market through 2023 is approximately one million SWU per year. This is equivalent to 1.7-2.5% of worldwide enrichment requirements and 6-7% of U.S. requirements. No additional enrichment services from DOE inventory is expected to enter the commercial enrichment market in the subsequent ten years. (DOE Note: these inventory amounts cited in ERI's analysis differ from the amounts that DOE has transferred and plans to transfer each year. This is because ERI is capturing the year in which the uranium is used in a reactor, not when DOE releases the material "into the market." This should not be construed to mean that DOE is exceeding the amounts identified in the Secretarial Determinations. Instead, it is intended to recognize that ERI is accounting for complex realities of the nuclear fuel markets – that material is not ultimately consumed for years after it's produced, or released in this case. This approach is consistent with that taken in previous years that informed previous Determinations.)
- ERI continues to believe that the change in market price due to DOE inventory entering the market provides an important measure of the DOE material's impact on the domestic industry.
- DOE inventory entering the commercial markets is certainly one of the market factors, but the DOE inventory must be judged in the context of its relative importance when compared to other market factors.
- The results of ERI's market clear price analysis indicate that the price impact attributed to DOE inventory entering the uranium market averages \$2.8 per pound over the period 2014-2023. This is equivalent to 8% of the current spot price and 6% of the current term price. The price impact attributed to DOE inventory entering the conversion market averages \$1 per kgU as UF<sub>6</sub> over the next ten years. This is equivalent to 12% of the current spot price and 6% of the current



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term price. The price impact attributed to DOE inventory entering the enrichment market averages \$4 per SWU over the next ten years. This is equivalent to 4% of the current spot price and term price.

- ERI has also developed a multivariable correlation between the monthly spot market prices for uranium concentrates published by TradeTech and the monthly spot market values of supply and demand, which are also published by TradeTech. This correlation was then used to simulate the 2009 through 2021 spot market price for uranium concentrates with and without the DOE inventory entering the spot market. The results of applying this correlation are projections of a potential spot market price decrease of \$2.8 per pound  $U_3O_8$  over the next three years (2014-2016) rising to an average decrease of \$5.5 between 2017 and 2021 as spot market prices recover. This represents an estimated impact on spot market price of 7% to 9% from DOE inventory entering the uranium market.
- As a point of comparison, it is noted that uranium price indicators have declined by 50% for the spot market and 35% for the term market in the three years following the Fukushima accident.
- Based on the \$3/lb estimated impact of DOE material, ERI calculates the potential long-term employment loss to be 44 person-years over the next ten years, meaning that future employment is reduced by approximately 4% on average as a result of the DOE inventory releases.
- While U.S. uranium industry production has risen since 2003 and continued to rise after the start of the DOE uranium inventory barter in December 2009 as well as during the market decline in 2013, there has been an impact to the actual and planned production of some U.S. operations. There have been announced cutbacks in existing U.S. uranium production in 2012 and 2013. In 2013, the reduction in production from these cutbacks was limited but is expected to be about 1.0 million pounds in 2014. Total U.S. production is expected to increase in 2014 as new production more than offsets the cutbacks.
- Comparing market factors that contributed to 2013 uranium supply excess relative to 2008 shows that the increased supply from the DOE inventory entering the market was responsible for about 10% of the total of all market factors increasing excess supply in 2013 and a projected 8% for 2014. If DOE inventory entering the commercial markets had remained at 2008 levels then the net supply excess for 2013 and 2014 would decline by 15% to 20%, but the uranium market would still be considerably over-supplied.
- Review of market capitalization for U.S. uranium producers shows that it is sensitive to changes in the spot market price, particularly for smaller mining companies. Following the Fukushima accident in March 2011, market capitalization declined rapidly. While the impact of large changes in the spot

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market price is obvious, the effect on market capitalization from the smaller price changes attributed to DOE inventory entering the market is not as clear. It is of interest to note that the market capitalizations have been increasing during the last six months even though market prices have declined.

- Comparing realized prices to the spot market price during the period 2011 to first quarter 2014 shows that some mining companies' realized prices are spot-market based while others have hedged their exposure to the spot market by locking in prices using a base price escalated approach for a portion of their portfolio. Less than 30% of the production came from companies that were effectively unhedged (no long-term contracts with higher fixed prices).
- If market prices remain at the current depressed levels for several years, which seems to be the consensus view of many in the industry, then more U.S. production will be impacted and may be put on standby, as existing longer term contracts at higher prices are completed and can only be replaced by new, lower-priced contracts.
- The introduction of DOE inventory into the conversion market results in a sales volume impact of 0.6 to 0.7 million kgU, which is a 7% to 8% reduction in sales volume. This is on top of Converdyn's stated 25% sales volume loss associated with Fukushima. Total secondary market supplies in 2014 are expected to be approximately 16.5 million kgU. The DOE inventory represents 18% of secondary market supply in 2014, enricher underfeeding will be 29%, upgrade of tails in Russia will be 32%, plutonium and uranium recycle will be 16% and Russian HEU feed will be 4% of secondary market supply.
- DOE inventory is projected to have a 7% to 8% impact on Converdyn sales volume in 2014. The production of UF<sub>6</sub> has high fixed costs. The loss of sales volume associated with DOE the entry of DOE material in the conversion market, assuming that the fixed portion of production costs range from 80% to 100%, results in a production cost increase of 6% to 8%.

Based on the analysis contained in this study, it is not clear that a reduction in DOE inventory releases would cause the overall market conditions to change enough to make a significant difference in the health and status of the domestic industries.

- As stated by ERI in its 2012 market impact study, even if the potential impact of any individual transfer by DOE is not in itself significant, the nuclear fuel markets recognize that DOE controls a very large amount of material. The predictability of DOE's transfer of that material into the commercial markets over time is very important to the orderly functioning of these markets. In this regard, it is critical for long-term planning and investment decisions by the domestic industry that

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there can be confidence that DOE will adhere to what it presents as being established guidelines and plans.

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**DOE Comments on the ERI Report**

The final ERI report is comprehensive and provides a professional and independent assessment of the market place and DOE's proposed uranium sales. DOE staff thoroughly reviewed the initial draft report and gave several comments to ERI seeking clarification on their approach and findings and correcting information on DOE actions or relationships that could otherwise be misconstrued by an outside reader. The major comments can be summarized as follows:

- In some cases the narrative gave the reader a different impression than what was meant. For example they note that they said in 2012 that the DOE uranium sales were not an adverse material impact, but they could not say that this year. It gave the reader the impression that ERI believes it is an adverse impact, whereas verbal discussions revealed that the statement was intended to convey that ERI would not state a position in this report.
- Market prices were quoted from only one company (Trade Tech) when there are several other market indicators available.
- The report seemed to indicate that DOE material was continuing to enter the market, so DOE sought clarification on whether the material was entering the market or continuing to displace demand that would otherwise exist.
- A number of clarifications were provided by DOE on amounts and forms of material and the timing of their transfer (e.g. off-spec UF<sub>6</sub> and non-UF<sub>6</sub> being analyzed separately).
- DOE sought additional information and discussion as to why ERI's particular approach (i.e. market clear analysis) was used, why it was more appropriate than other possible approaches, and whether it was supplemented to address any shortfalls of the modeling technique.
- DOE sought additional information on the quantitative impacts of other events (e.g. reactor shutdowns post-Fukushima, production increases in Kazakhstan) to provide a basis/context for evaluating DOE's relative impact.

Through two additional revisions, ERI adequately addressed DOE's comments and concerns, with both parties recognizing that DOE was seeking an independent analysis. In fact, ERI added a very good summary of their findings across the range of factors (including, but going well beyond price) in Section 6 of the final report that has aided in accurately relaying their findings here.

In addition to providing a comprehensive analysis, ERI also sought input from industry to ensure that any valid market-related aspects could be factored into their analysis. While

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NE includes discussion of additional factors below, ERI's analysis is considered complete and consistent with DOE's tasking.

**Meetings with Industry**

In order to better understand the view of the nuclear fuel cycle industries, the Department routinely meets formally and informally with representatives from industry. Over the past several months, the Department met with a number of entities that have an interest in the Department's uranium transactions, including:

- **URENCO - March 19, 2104** w/ S1, NE and S2 staff
- **UPA and Converdyn - February 6, 2014** w/ NE, EM, NNSA, and GC
- **UPA - January 23, 2014** w/ S2, EM, and NE
- **Converdyn - November 14, 2013** w/ NE
- **NEI Fuel Supply Forum - July 30, 2013** NE presented an overview of the 2013 Excess Uranium Inventory Management Plan and had several discussions with fuel producers, enrichers, fabricators, and utilities

These meetings and follow-up communications provided valuable information from their respective points of view.

It is impossible to summarize all of the points in UPA's 9 page letter to Dr. Lyons. However, in general, the uranium production industry feels that DOE material, and maybe more importantly actions and communications, are having an adverse material impact on the industry. They claim that past ERI analyses underestimate the impact of DOE material on the industry and do not account for a number of factors besides market prices. They are unhappy that DOE no longer intends to use the previous 10% guideline, which they saw as a "cap," even though DOE was clear as to its use as a guideline with latitude to exceed it in any given year. The uranium producers, through UPA, are advocating that DOE reduce the amount of material transferred in the near term in order to show that DOE recognizes the current condition of the uranium market.

ConverDyn, the sales agent for conversion services from the only uranium conversion facility in the United States, also provided input to the Department on the condition of the market, the impact it believes DOE material is having on the market, and recommendations on how DOE could improve the way it conducts its analysis and uranium transactions. ConverDyn asserts that it is experiencing a "material adverse impact" due to DOE uranium transactions in the form of reduced sales, reduced production volumes, and depressed prices. ConverDyn says Fukushima-related volume lost over 2014-2016 projected to be [REDACTED] and that reduced sales volume from DOE uranium sales will be [REDACTED] over that same period.

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**Hahne Analysis Summary**

NE staff also met with Frank Hahne of Flour-B&W Portsmouth, LLC (FBP) (Frank also serves as NEI Nuclear Fuel Supply Committee Chairman) who had completed a similar analysis with input from [ REDACTED REDACTED ]. FBP is the contractor responsible for the accelerated cleanup activities at the Portsmouth site, which benefits from EM's uranium transactions. Important points from this analysis are presented below.

- As reported by EIA, the **price** paid for U.S. origin uranium over the past 20 years has been at its highest in the last 5 years, since the barter program started.
- US uranium **production** has been increasing since the beginning of the barter program, and is at its highest level now since 1997 (EIA Data).
- US uranium **employment** has grown (2009-2012) since start of barter.
- US uranium producers **Market Cap** has increased significantly over time, with many approaching pre-Fukushima highs over the last 3 months
- US producer Capital Expenditure decisions are made based on **long-term U3O8 prices**, not spot prices. U3O8 Term price is \$50/lb.—up from the decades before level of \$10/lb.
- Term & spot **UF6 conversion prices** are up 40% to 45% since barter began.

**Viewpoints from a Utility Perspective**

The ERI report states: “The most important factors in addition to the DOE inventory releases are listed below:

- Increased uranium production in Kazakhstan
- Direct demand losses, primarily in Japan and Germany, related to the March 2011 accident at Fukushima Daiichi in Japan
- End of U.S.- Russian HEU Agreement in 2013
- Increase in net demand outside of Japan and Germany
- Changes in secondary supply”

In addition to information that was directly supplied to DOE from industry sources for its consideration, the following are additional pieces of relevant information captured from industry trade publications, reports, and other openly available sources.

1. Increased uranium production is also occurring in Canada and Niger. In an oversupplied market the established suppliers also have to cut back on their production to bring the market into balance. While there are indications that some suppliers are curtailing production it hasn't occurred to the extent needed.

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In addition, new sources of supply will also impact the market.

1. Cigar Lake: starts production in Q4 2013/Q1 2014. Projected 18 million pounds by 2018
2. CGNPC Husab Project: begins production in 2016. Projected 10 million pounds by 2019
3. AREVA's Imouraren: begins production in 2016. Projected 9.5 million pounds by 2019

Source: UxC DOE barter program: approximately 6 million pounds U3O8e through 2021

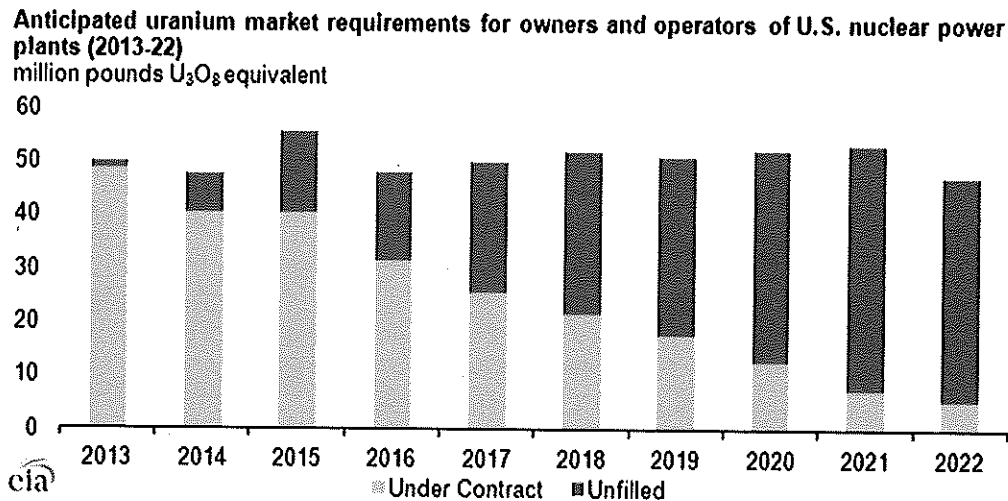
2. Declined direct demand not due to Fukushima: In the U.S., steam generator issues have forced Crystal River #3 and San Onofre 2 & 3 to shut down early. In 2013, Ft Calhoun was also closed. In addition, Kewaunee and Vermont Yankee were closed (according to NEI) for "adverse market conditions". This represents an 8% decline in nuclear capacity in the US.

In addition, the low price of gas has an impact on the uranium industry. In NEI's financial briefing, given in February 2014 to Wall Street analysts noted that for a single unit NPP its cost is \$50.86/MWhr while a new combined cycle gas plant at \$3.50 is \$46.60/MWhr. If gas prices increase to \$5 then the gas plant costs of electricity increase to \$57.30/MWhr. The NEI presentation also notes that merchant markets do not recognize or monetize the valuable attributes of nuclear such as grid reliability, price stability, clean air compliance etc. These factors have also led to 45% of the coal generation in the US being shut down since 2010. EEI is expecting 100 GW of fossil capacity to be retired by 2020.

3. Increase in net demand is occurring in China where generally the market perception is that it will meet its target for growth of new nuclear of 58GWe by 2020. However, China is probably not buying US uranium because of American proliferation policy.
4. Changes in secondary supply – Underfeeding and projects under construction will account for most part of supply growth between 2014 and 2018. In 2014, DOE material will account for 4% of total uranium supply in the world.
5. Increased Production and Sales in Kazakhstan- In 2012, Kazakhstan produced 54.3 million pounds U3O8, which amounted to 36% of global output. Kazakhstan uranium production has targeted one third share of the US market by 2015.

**Other important factors that have an impact on the uranium market–**

1. Below is from EIA's February 2014 announcement of the impact on domestic uranium production from the completion of the Megatons to Megawatts program (from the 2012 Uranium Annual report produced in 2013, so slightly outdated):

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2. UX's April 7<sup>th</sup> weekly newsletter noted the decision of two major investment banks in December to close their trading desks for a number of commodities including uranium, will impact liquidity in the spot market.

**DOE Recommendation and Underlying Basis**

Upon reviewing the ERI Report and other reports as well as meeting with industry on many occasions, it is clear that the nuclear fuel market (it is a global market) is in a weakened state due to many factors. The factors include reactor shutdowns after the Fukushima events (price was reduced by 50 percent afterwards) which greatly diminished demand, Kazakhstan's rapid expansion of production and sales which increased supply while keeping market prices at low levels, and the underfeeding of the enrichment plants (29 percent of conversion market secondary) and stripping the uranium tails (32 percent of conversion secondary market) which adds both uranium and conversion to the marketplace. It is important to note that DOE's uranium transfers (2705 MTU natural uranium equivalent, equivalent to 4.5% of the annual global production and 15% of annual U.S. reactor demand) are significantly less of an impact than the other factors.

Industry meetings continue to help in understanding their concerns and advice related to the sales of DOE uranium into the market. First and foremost, the industry looks for DOE to be transparent and a predictable source of supply. In this respect, our data given to ERI for analysis laid out our absolute best estimation of planned DOE sales from this year through 2033. ERI accounted for complex realities of the nuclear fuel markets, such as the fact that material transferred in one year will continue to exist in "the market" until ultimately used in a reactor. Perhaps more importantly, we do not plan to increase our sales or transfers this year in light of the weakened market.

Industry also stressed the point that we should be selling in the long-term market instead of the spot market. We agree that, where we can, it is better to seek to fill contracts in the long-term. However, DOE cannot require the recipient to take specific actions with the



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material. It is our understanding, however, that one recipient (FBP) has taken steps to split the uranium they receive between the spot and term markets, thus significantly reducing any impact.

Another important industry talking point is the loss of jobs due to DOE sales. While we clearly disagree that DOE sales are the predominant reason for job losses and the potential jobs losses attributed to DOE (ERI estimates 44 person-years over 10 years) are not significant, especially compared to the losses that would be incurred under different course of action, we agree that continued job losses are fundamentally harmful to the viability of the industry.

The Secretary, in determining whether DOE uranium sales would create an “adverse material impact”, must answer whether DOE uranium sales alone cause the uranium industry to change from its position in the market without DOE sales. The expert staff within the Office of Nuclear Energy believe that the uranium industry would be in the same position in the market with or without DOE sales due to the limited ability of the relatively small amount of material and services being displaced to significantly influence the domestic uranium mining, conversion, and enrichment industries. We believe that it is much more important for DOE to adhere to its stated plans and provide industry with a predictable supply on which they can base their business decisions

For these reasons, the staff recommend that the Secretary determine that the Department’s planned uranium sales do not have an adverse material impact.

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**Attachment A: ERI's Statement of Work**

**Statement of Work  
for Task 17**

**Prepare an Analysis of the Potential Impact on the Commercial Markets of the  
Introduction of DOE Excess Uranium Inventory in Various Forms and Quantities  
During Calendar Years 2014 Through 2033**

Energy Resources International, Inc. (ERI) will perform the following work for the Office of Uranium Management and Policy in the Office of Nuclear Energy, Department of Energy (DOE) as Task 17 under GSA FABS Contract No. GS-23F0242P and DOE Contract No. DE-DT0000752.

**Background**

ERI will prepare an updated analysis of the potential impact on commercial markets associated with the introduction of DOE excess uranium inventory through sale or transfer. The need for a new market impact study arises from Section 306(a) of The Consolidated Appropriations Act, 2014, which states that *"Any determination...shall be valid for not more than 2 calendar years subsequent to such determination."* The last significant market impact study that was conducted by ERI was dated April 23, 2012 and was used to support DOE's Secretarial Determination of May 15, 2012.

**Scope**

ERI will prepare an analysis and report of the potential impact on the commercial markets of the introduction of DOE excess uranium inventory in various forms and quantities through sale or transfer during Calendar Years 2014 through 2033 from information provided by DOE. The analysis will be based on DOE planned uranium sales and transfers. The sales and transfers include natural UF<sub>6</sub> barter by DOE's Office of Environmental Management, down blending of highly enriched uranium (HEU) by the National Nuclear Security Administration (NNSA) including the BLEU program with the Tennessee Valley Authority, and the transfer of high assay depleted uranium (DU) to Energy Northwest. The quantities provided in the DOE Excess Uranium Inventory Management Plan, Report to Congress issued by DOE in July 2013 will be updated to reflect the most recent status of existing initiatives and current plans.

ERI's report may also include sensitivity analyses on the quantities introduced by DOE as well as a scenario assuming the same quantities as stated in the 2012 Secretarial Determination. The task may also include efforts to respond to questions by DOE and others subsequent to the report's issuance.

**OUO – Includes Business Proprietary Information from multiple sources**

The methodology to be used by ERI in this business analysis will be generally consistent with that used by ERI in previous market impact analyses prepared for DOE for the sale or transfer of other materials identified. The methodology may need to be supplemented by analysis to provide additional detail on the impact on commercial markets and the domestic industry. The analysis will be based upon the most recent forecasts of requirements published by ERI and others, corresponding supply forecasts, and any other industry information necessary to ensure the most current and accurate analysis possible. It will address the potential effect of such sales or transfers by DOE on the commercial markets for uranium concentrates, conversion services and enrichment services, as well as their potential impact, if any, on initiatives that are presently underway, including current uranium extraction operations, uranium exploration and development, previously announced plans to license and construct new enrichment facilities, or the U.S. Russia Suspension Agreement as amended during 2008

**Price**

The estimated level of effort for this task is the range of 240 to 300 hours provided from two subject matter experts and editors. At the current DOE-ERI contract rates the estimated cost range is \$[REDACTED].

**Schedule**

DOE has requested that the analysis be completed and a report delivered by March 20, 2014. This schedule represents a significant compression of the timeline originally envisioned by ERI. ERI will use its best efforts to meet the March 20 delivery date, but cannot guarantee this. ERI's ability to meet the desired schedule will be assisted by DOE's authorization for ERI to begin work on this task as soon as possible and by DOE's transmittal to ERI of relevant information on a timely basis.

**Declaration of Ashley David Henderson  
Exhibit 1-B**

*FBP Update Impacts Of DOE Uranium Barter Program On U.S.  
Domestic Industry (Released to DOE - Redacted Version)*



**FBP Update Released to DOE Version**  
**Impacts Of DOE Uranium Barter**  
**Program On U.S. Domestic Industry**

**Fluor-B&W Portsmouth LLC**

**April 23, 2014**

**FBP Proprietary**

**FBP advocates full appropriation funding for Portsmouth D&D; but continued DOE UF6 uranium barter sales if appropriations are not forthcoming**

- In FBP’s analysis based on objective measures to date conclude that the U.S. uranium mining, conversion and enrichment industries have not experienced an adverse material impact from DOE’s Uranium Barter Program.....**
  - Uranium Market Prices (Long Term & Spot)
  - Domestic Uranium Production
  - Domestic Employment
- DOE has implemented a Transparent and Predictable Plan**
- FBP has followed through and provided DOE with a model (Traxys) designed to sell the material in the a market neutral non-disruptive manner—moving material from the spot to long-term market and domestic to international.**

## DOE Barter Sales (FBP-Traxys Model)

- DOE quantities are minor compared to other sources
- Sales methodology to minimize impact on uranium market
- Preference to sell to end users rather than speculative players to prevent material from competing against itself.
- 50% of sales to U.S. utilities / 50% to non-U.S. utilities
- 50% of sales under mid and LT contracts, spot quantities very minimal
- U308 and Conversion have sometimes been contracted separately

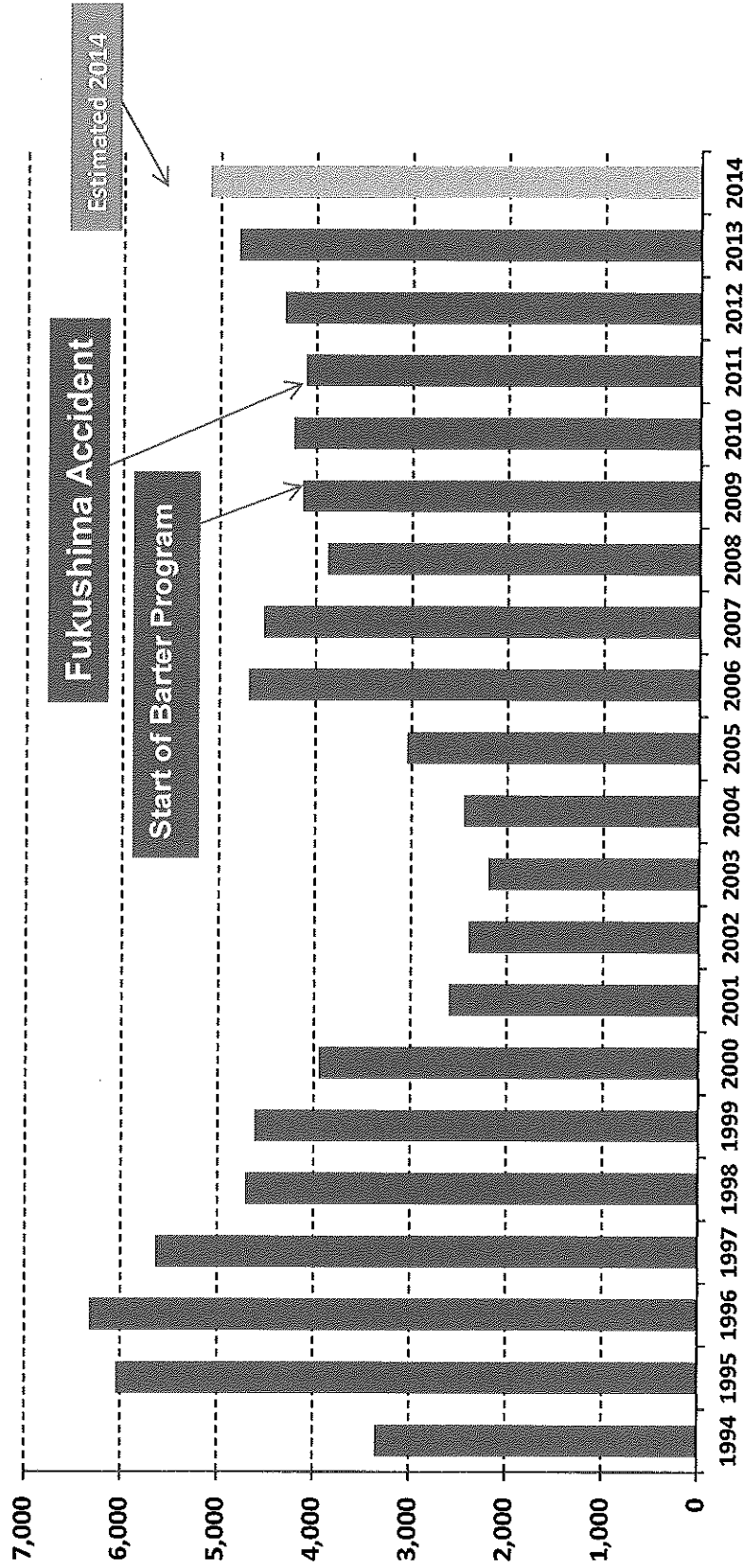
## The DOE U barter program has not had an adverse material impact on domestic industries as shown by...

1. As reported by EIA, the price paid for U.S. origin uranium over the past 20 years has been at its highest in the last 5 years, since the barter program started.
2. US uranium production has been increasing since the beginning of the barter program, and is at its highest level now since 1997 (EIA Data).
3. US uranium employment has grown (2009-2012) since start of barters.
4. US uranium producers Market Cap has increased significantly over time, with many approaching pre-Fukushima highs over the last 3 months
5. US producer Capital Expenditure decisions are made based on long-term U3O8 prices, not spot prices. U3O8 Term price is \$45-\$47/lb. —up from the decades before level of \$10-\$15/lb.
6. Term & spot UF6 conversion prices are up 40% & 25% since barters began.





# U.S. Uranium Production

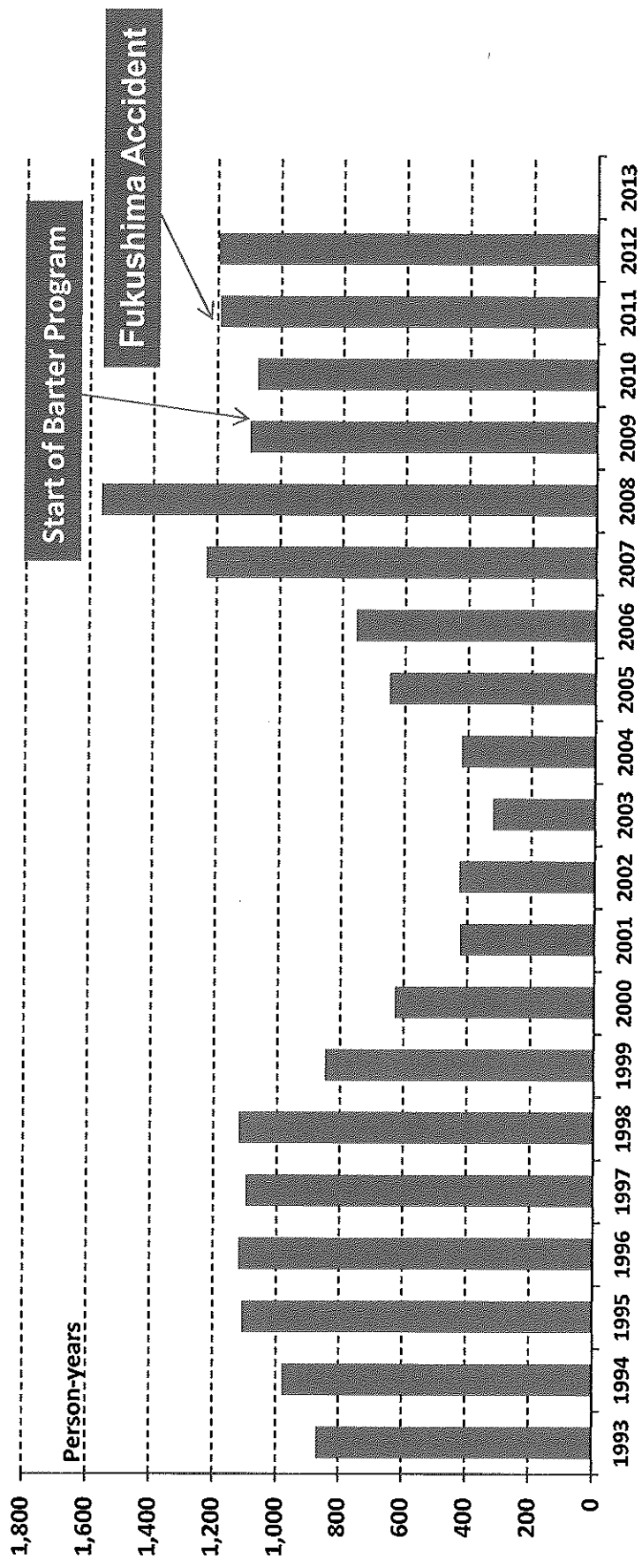


**Since the start of uranium barter, domestic production has increased to highest level since 1997 and is likely to continue to increase in 2014**



# U.S. Uranium Production Industry Employment

Person Years

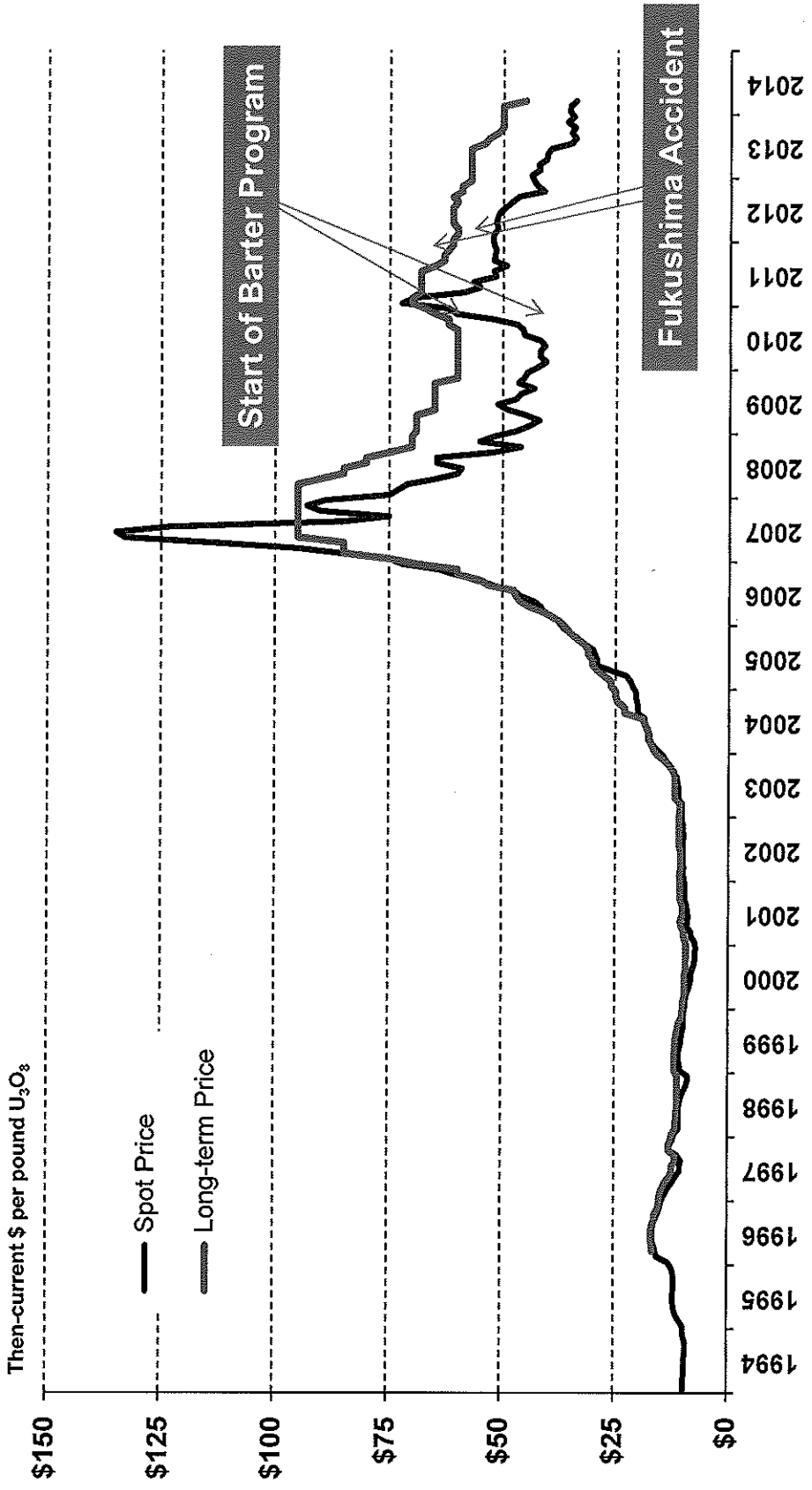


Since the start of uranium barter employment has increased. Recent layoffs in 2013 are partially offset by the startup of 2 new domestic ISL producers in 2013 and 2104

Source: Energy Information Agency Domestic Uranium Production Reports for 2012 and 2004

FBP Proprietary

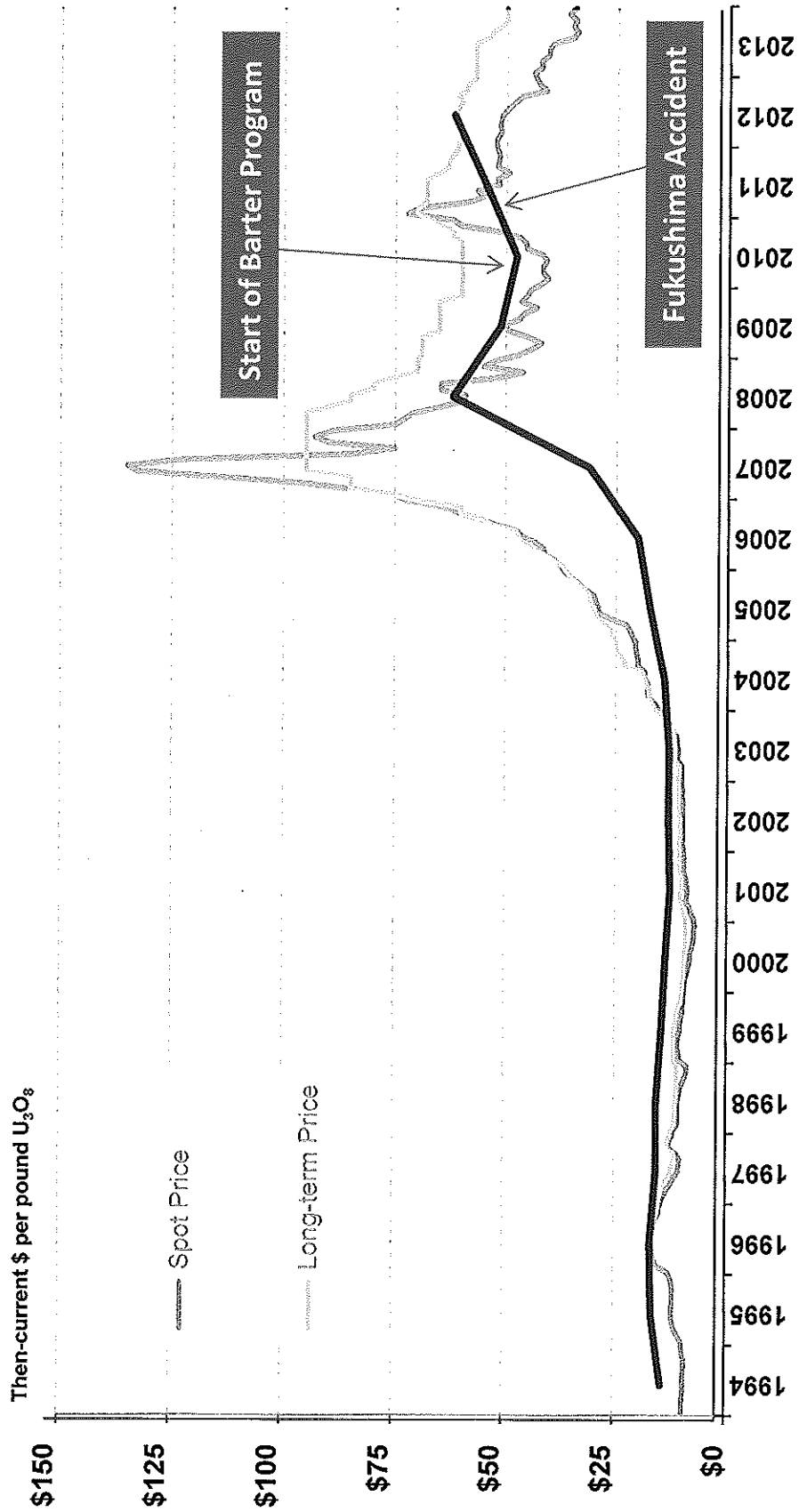
# U<sub>3</sub>O<sub>8</sub> Prices (Industry Published Indices)



Prices rose quickly, over-stimulated by an excess of exuberance, not fundamentals. A correction was inevitable. 90% of the price drop occurred prior to start of barter program.

# Price of U.S. Origin Uranium (U3O8) Sold to Owners/Operators of U.S. Nuclear Plants . . .

Fluor-B&W | Portsmouth



**Highest U.S. Origin prices have been in the last 5 years—Over 5X the decade of 1994-2004. Average price for the latest reported year (2012) is \$59.44/lb. U3O8**

Source: U.S. Energy Information Administration, 2012 Uranium Marketing Annual Report, weighted-average price for U.S. origin uranium sold to Owners/Operators of nuclear power plants

## Market Insights

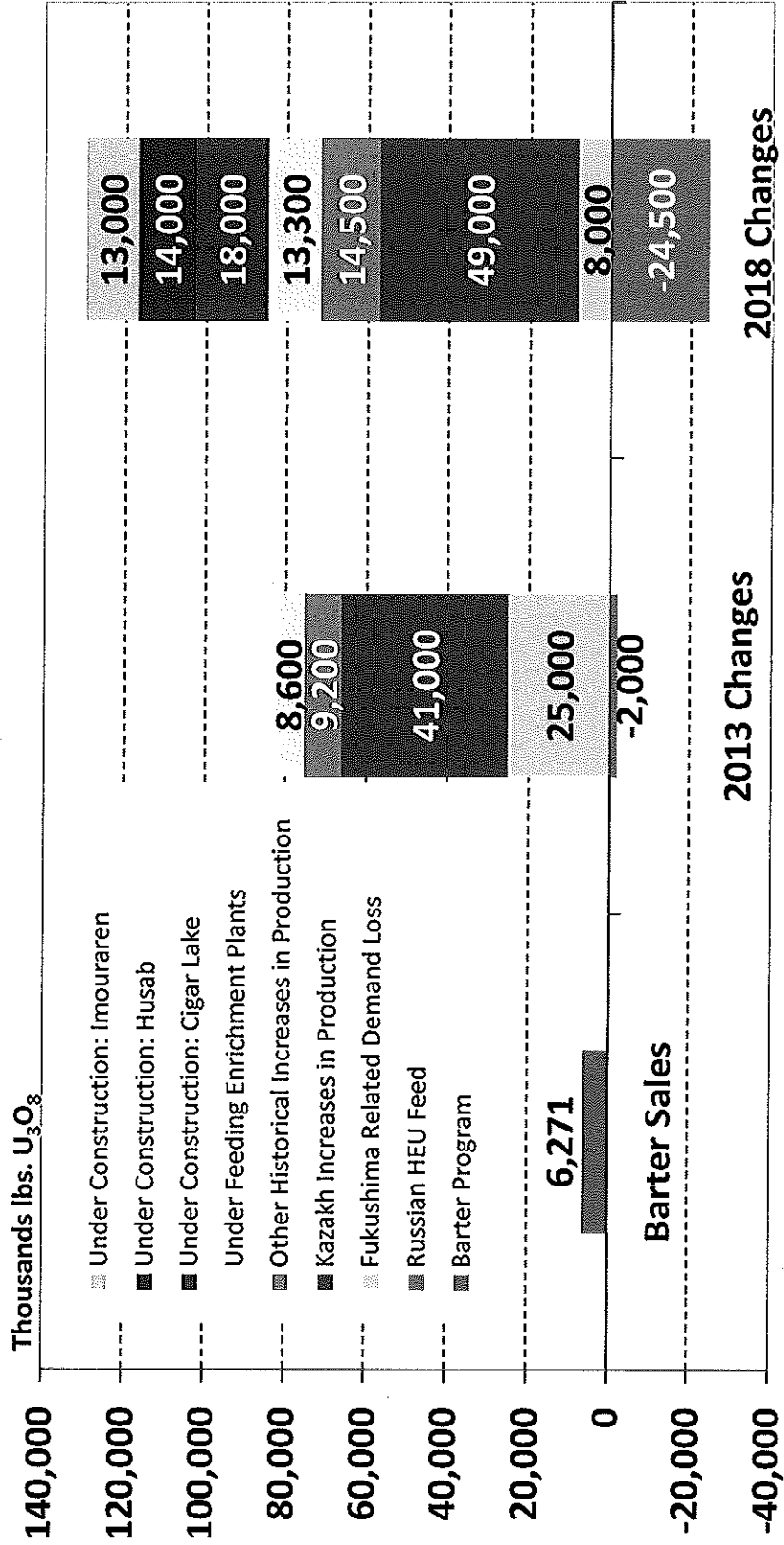
- **The 2007 bubble prices over stimulated supply and the imbalance was accentuated by a large, near-term loss of demand due to Fukushima.**
- **In response primary production needs to be reduced, yet it has continued to expand.**
- **Most expansion is by the world's largest suppliers, some of whom have expanded in other countries (Kazakhstan and Canada) while cutting back in the United States.**
- **Current market prices are well off their 2007 peak but still significantly higher than the pre-spike decade, by 3X—5X.**

## Principal Contributions to Price Decline

- Reduction in near-term demand of 25 million lbs./year due to Fukushima
- Annual primary production increased 50 million lbs. (50%) from 2007 to 2012 – Kazakhstan accounted for more than 41 million of this increase
- Properties currently under development are projected to increase production by another 40 million lbs. (25% increase) through 2018
- Increase in excess enrichment supply (partially due to Fukushima) encourages additional “production” of about 13.3 million lbs. equivalent per year from under-feeding/re-enriching tails
- Low cost financing (Stimulus derived) available to banks resulted in significant quantities of excess near-term uranium being offered at low, fixed prices to be held for future delivery at imputed interest rates ~3%
- Above factors are partially offset by end of feed from Russian HEU Deal



# U<sub>3</sub>O<sub>8</sub> Supply/Demand Changes Since Peak Price Year—2007

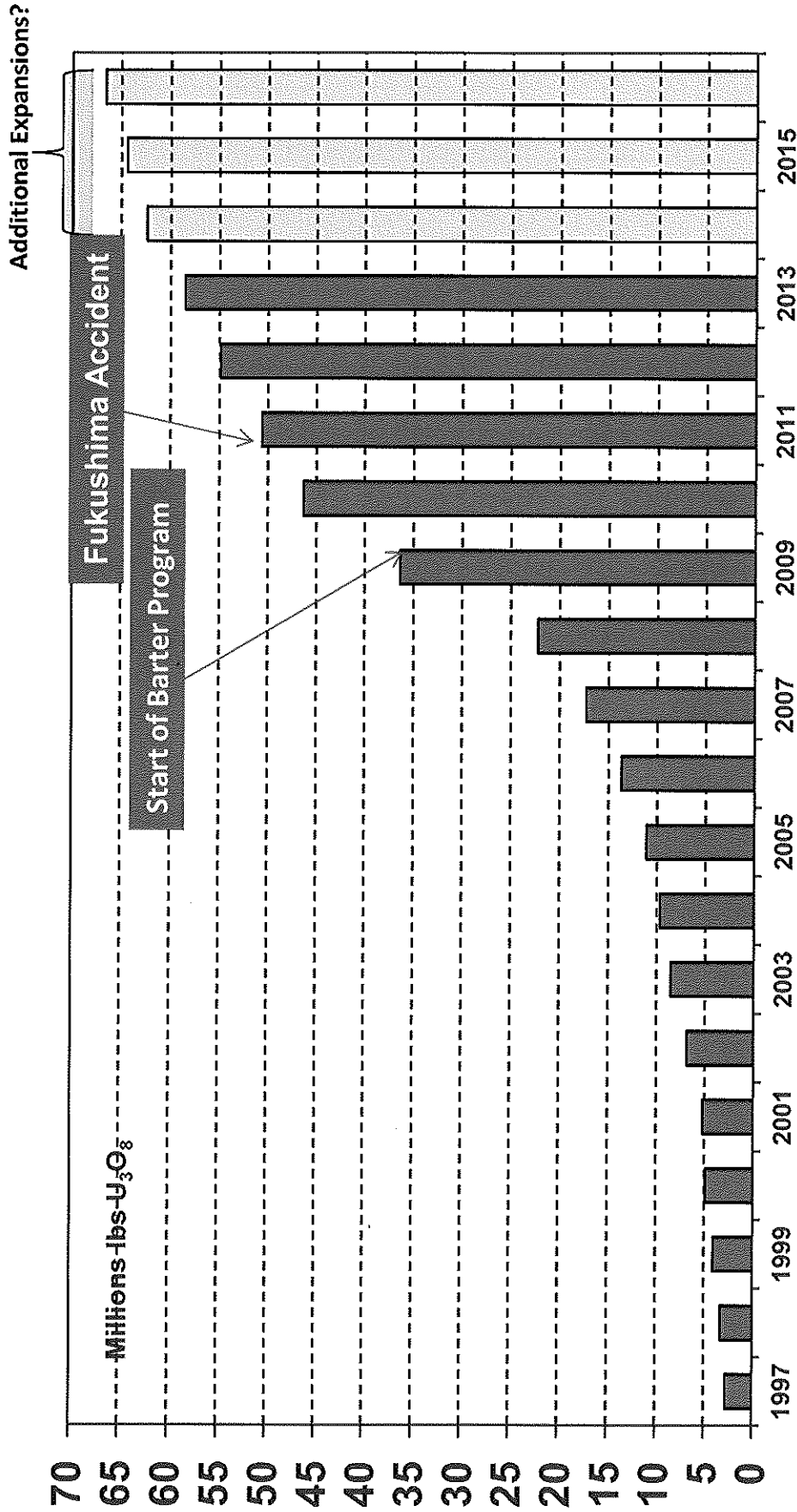


DOE Barter quantities are very small compared to other changes

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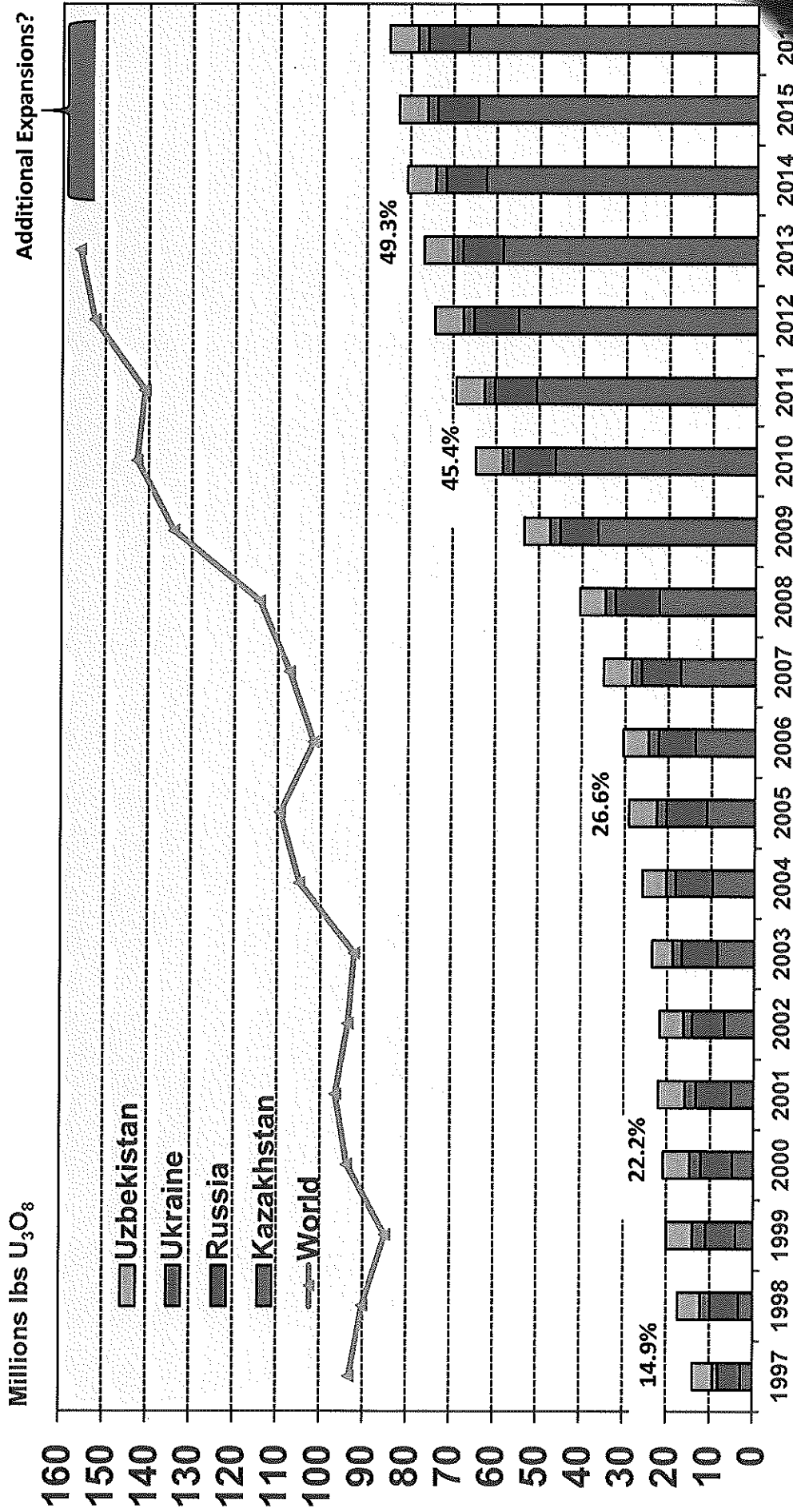


# Kazakh U<sub>3</sub>O<sub>8</sub> Production



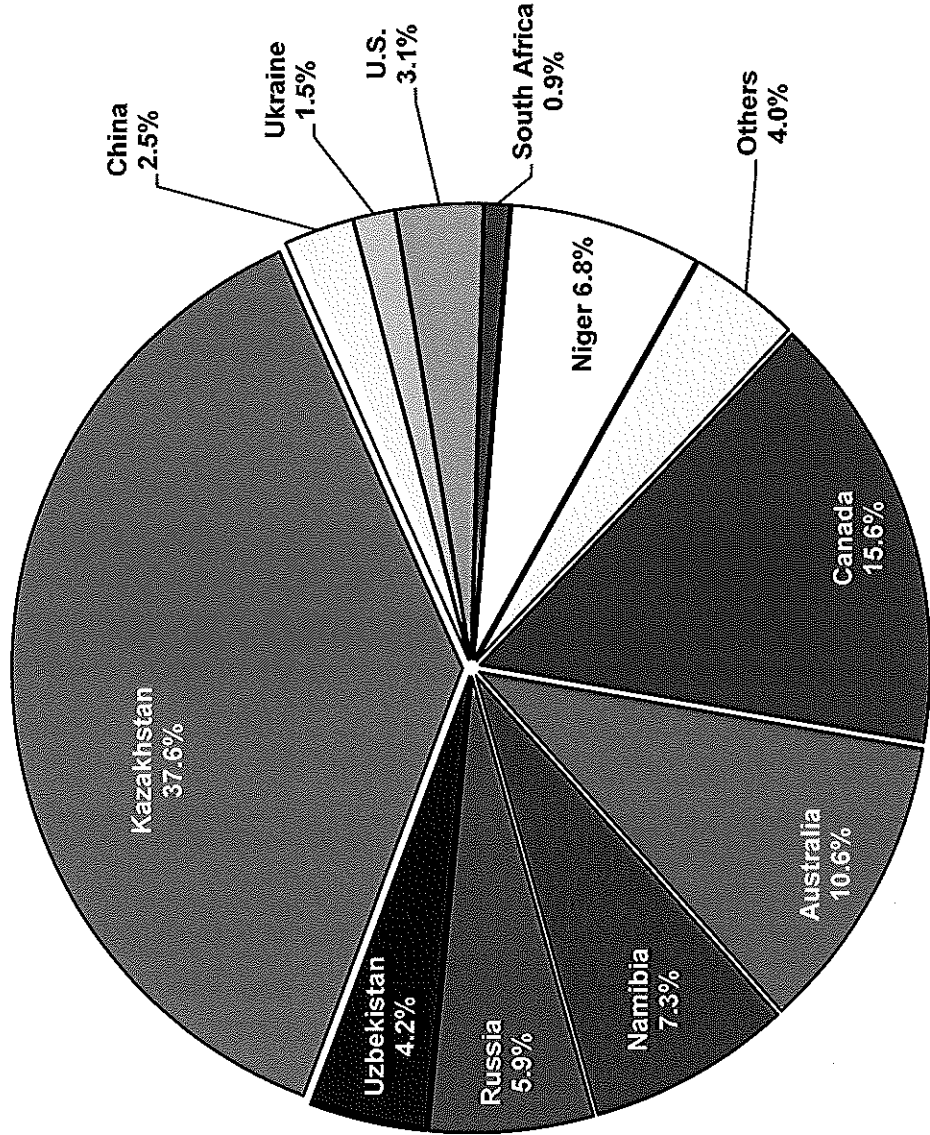
Expansions based on April 15, 2013 Central Asia Economy article discussing Kazatomprom plans.

# FSU Equivalent U<sub>3</sub>O<sub>8</sub> Production Market Share is 65% in 2013—if HEU and Underfeeding were included . . .



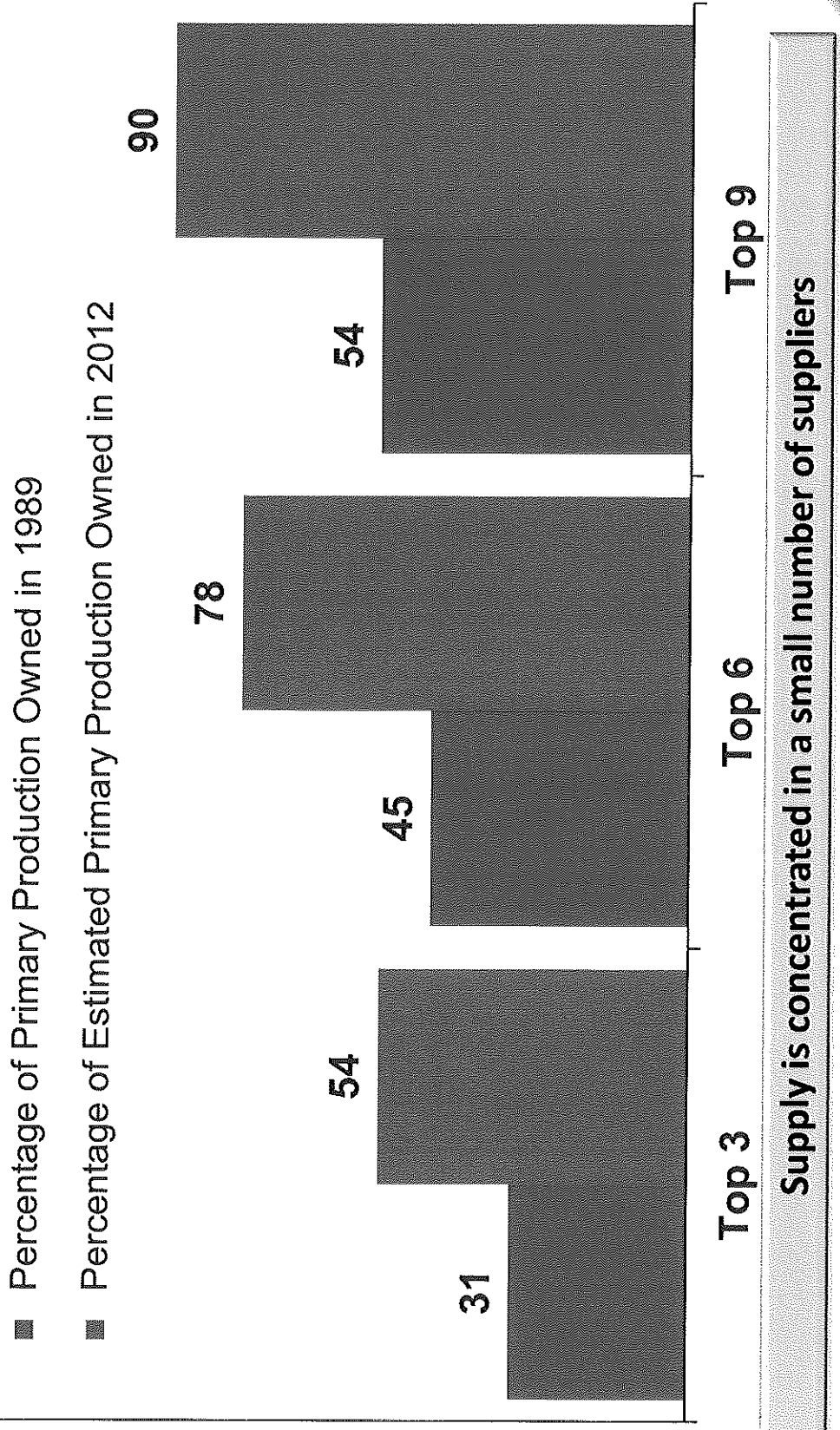
# 2013 Worldwide U<sub>3</sub>O<sub>8</sub> Production

Total = 155.8 million lbs (59,500 MTU Year-End Estimates)



Kazakh market share continues to grow

# U<sub>3</sub>O<sub>8</sub> Industry Supply Concentration Ratios (after ARMZ/Uranium One Merger, including Russian Underfeeding)



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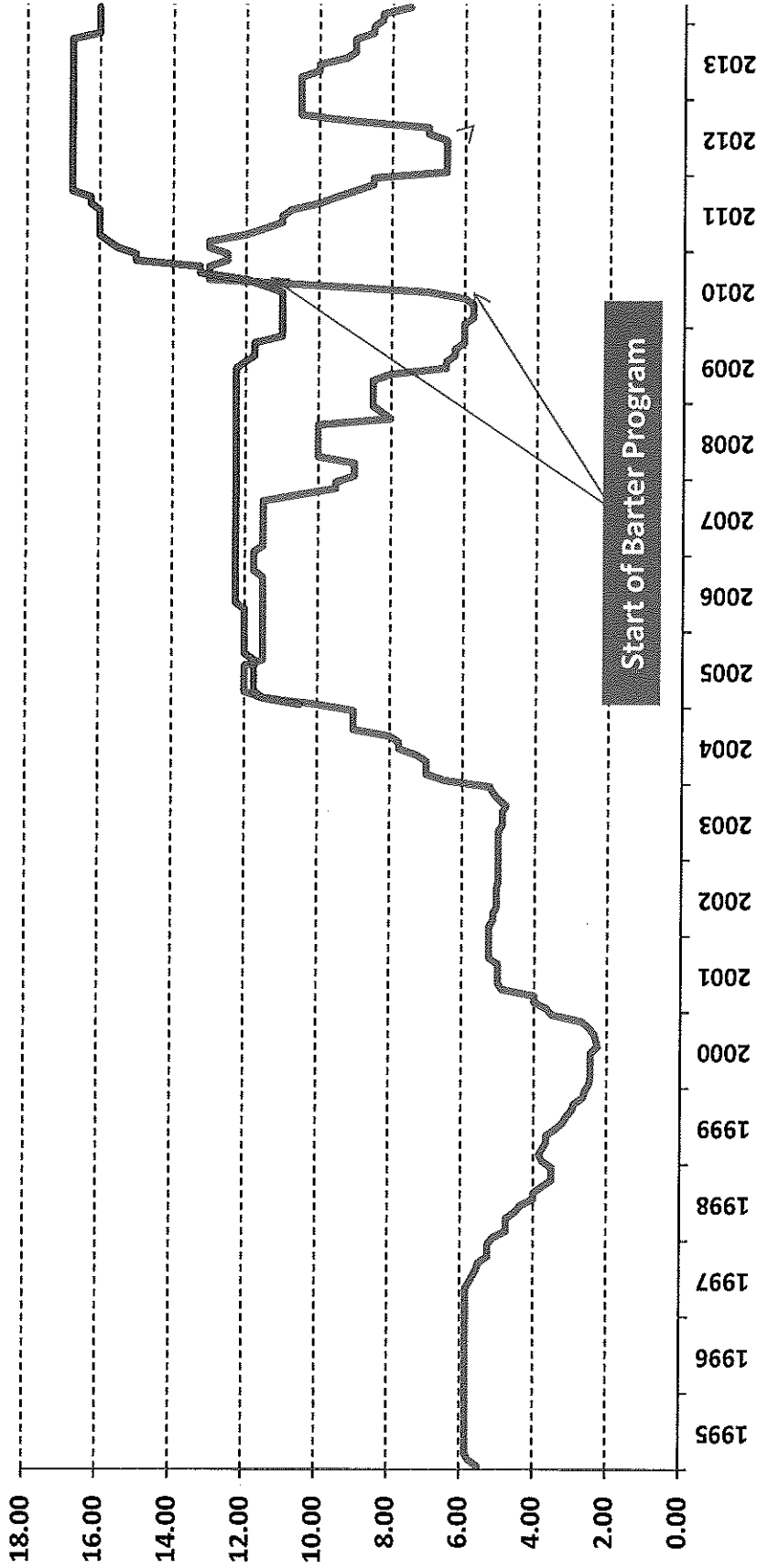
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# North American Conversion Prices



- Spot price changes show no correlation to barter sales.
- Term & spot prices up 40% and 25% since barter sales began.
- Term prices not very volatile, generally up since barter started

## Conversion Market Observations

- Some excess supply through 2018 even with expected shutdown of Springfields on August 31, 2014 (2 Years Early)
- Excess
  - Mainly due to underfeeding
  - Barter quantities are small about 4% of demand, about 25% of HEU feed which ended in 2013
- Some expansion could be necessary beginning late this decade if China does not reach its goal of self sufficiency



## Impact on Domestic Converter

- Appears that their policy is to sell on term market
- Term & spot prices are up 40% & 25% since barbers began; therefore there can be no price impact
- Resumed production in mid-2013 after year long shutdown for NRC licensing related upgrades
- Operating at near capacity; therefore no current production or employment impact

## Impact on Domestic Converter (Continued)

- Stated that barter causes loss of sales, raising average production costs (due to high fixed costs)
  - Estimated to maintain ~20% market share outside Russia & China (total demand about 50,000 MTU)
  - DOE uranium sales represent 2,800 MTU/year, with a 20% market share, ~560 MTU loss in sales
  - Stated 2,000 MTU loss would increase production costs by 20%, then 560 MTU loss in market share would increase costs by ~ 4% to 5%



## Impact on Enrichers

- Pre-2019 Barter transactions (Natural UF6) have had no adverse material impact on the enrichment market or prices due to small quantities.
- Post-2019 Re-Enriching tails will add enrichment demand to the market.

**Declaration of Ashley David Henderson**  
**Exhibit 1-C**

*May 12, 2014 Memorandum for the Secretary: Approve the Secretarial Determination Covering Proposed Transfers of Excess Depleted, Natural, Off-specification and Low-Enriched uranium over the Period 2014 through 2033 (Approved May 14, 2014)*




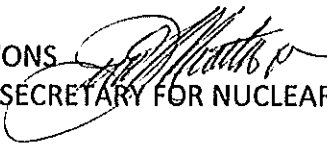
## Department of Energy

Washington, DC 20585

May 12, 2014

### MEMORANDUM FOR THE SECRETARY

THROUGH: DANIEL B. PONEMAN  
DEPUTY SECRETARY 

FROM: PETER B. LYONS  
ASSISTANT SECRETARY FOR NUCLEAR ENERGY 

SUBJECT: Approve the Secretarial Determination Covering Proposed Transfers of Excess Depleted, Natural, Off-specification and Low-Enriched Uranium over the Period 2014 through 2033

**ISSUE:** Whether to sign a determination that proposed Department transfers from its excess uranium inventory for the purposes of funding 1) the Office of Environmental Management (EM) accelerated cleanup services at the Portsmouth or Paducah Gaseous Diffusion Plants and 2) the National Nuclear Security Administration's (NNSA) down-blending of highly-enriched uranium to low-enriched uranium for NNSA programs will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry.

**BACKGROUND:** Section 3112(d) of the USEC Privatization Act requires that covered transfers of natural or low enriched uranium meet the following criteria:

- (1) the President must determine the material is not necessary for national security needs;
- (2) the Secretary must determine that covered transfers or sales of uranium from the Department of Energy's (DOE) inventory will not have an adverse material impact on the domestic uranium mining, conversion or enrichment industry, taking into account the sales of uranium under the Russian Highly Enriched Uranium Agreement and the Suspension Agreement (Secretarial Determination); and
- (3) the Department must receive fair market value for the material.

Section 306(a) of the Consolidated Appropriations Act, 2014 (Public Law No. 113-76) limits the validity of a Secretarial Determination, including prior determinations, to no more than two calendar years subsequent to such determination.

The EM and NNSA programs have been making their transfers pursuant to a Secretarial Determination dated May 15, 2012 (the 2012 Determination). Accordingly, because of the limitation imposed by section 306(a), a new Secretarial Determination must be





issued on or before May 15, 2014 to allow NNSA and EM to continue their respective transfers. The 2012 Determination covered up to 2,800 MTU per year of natural uranium (NU) or NU equivalent for transfers in calendar years (CY) 2012-2014. The proposed Secretarial Determination would cover the transfer or sale of up to 2,705 MTU per year of natural uranium or natural-uranium equivalent for transfers in CY 2014-2016 to support ongoing programs for accelerated cleanup services and the down-blending of excess highly enriched uranium. These proposed transactions are discussed in detail under attachment B.

**DISCUSSION: Basis for Office of Nuclear Energy Recommendation**

To ensure that this requested Secretarial Determination is fully informed, the Office of Nuclear Energy (NE) tasked Energy Resources International, Inc. (ERI), an experienced and well-regarded nuclear fuel consulting firm, to assess the potential impact on the domestic uranium mining, conversion and enrichment industries from DOE's transfers or sales of uranium being proposed or considered in 2014-2033, while also accounting for historical DOE transfers, some of which will continue to displace commercial supply into the future until it is used in a reactor. The ERI analysis provides information to NE to inform its estimate of the potential impact of DOE actions on the markets, to understand the positions of the affected industries, and to serve as a basis for NE's formulation of its recommendation for the Secretary. NE has analyzed the ERI analysis, reviewed other information, including information received by DOE from industry representatives in various forums and information regarding the uranium markets from other sources, and arrived at this recommendation based upon that review. An explanation of the NE review, including an assessment of the ERI analysis, and a more thorough accounting of the factors considered by NE in formulating this recommendation, is contained in Attachment C.

**ERI Analysis Findings**

ERI's analysis of the existing market conditions found that, as the Department was already aware, the uranium, conversion and enrichment industries are all challenged by market oversupply, with the uranium mining industry being the most imbalanced with respect to supply and demand. This oversupply has led to depressed prices in the three markets, which in turn have affected both employment and production levels. The ERI analysis pointed to a number of factors leading to this oversupply, including decreased demand due to reactor shutdowns in Japan and Germany following the earthquake and tsunami at Fukushima in March 2011 and increased secondary supply on the markets. ERI considered a number of other factors in its analysis, including employment, production levels, market capitalization, realized prices, production costs, sales volumes, and DOE inventory and plans relative to other market factors.

The planned annual DOE transfers in 2014 to 2016 of 2,705 MTU are roughly equivalent to 7.1 million pounds of U<sub>3</sub>O<sub>8</sub>. For comparison, this amount is 4.5% of projected global production in 2014 and 15% of the projected U.S. reactor demand. The ERI analysis found that the introduction of DOE material in the markets is estimated to decrease

market prices by approximately \$3 per pound of  $U_3O_8$  for uranium (9% of the current spot market price and 6% of the term market price), \$1 per kilogram of  $UF_6$  for conversion (12.5 % of the current spot market price and 6.25% of the term market price), and \$4 per separative work unit, or SWU (4 % of both the current spot and term market prices). The ERI analysis estimated that a decrease in the quantity of DOE transfers would do little to improve the market condition or reduce other impacts on the industry. ERI's analysis supports a conclusion that although DOE's actions will necessarily have some impact on the market, and that this impact is greater now than it was in 2012, DOE's actions are not the driver of the current negative states on the domestic uranium production, conversion, or enrichment industries. NE agrees with this assessment and believes that the markets will adjust to the major drivers of the depressed markets over time and that the DOE transfers will not harm this adjustment.

The ERI report contains input from the affected industries, and the information mirrors that presented to DOE during meetings with industry. All industry participants note the importance of DOE predictability in supporting more stable markets and a strong domestic industry. In fact, most identify predictability as the single most important factor. Given this, the offices engaged in uranium transactions strongly believe that it is necessary to continue to adhere to the 2013 Excess Uranium Management Plan (the 2013 Plan), which is consistent with the 2012 Determination. The ERI analysis notes that the proposed transfers for CY 2014-2016 are consistent with both the 2013 Plan and the 2012 Determination with respect to the total quantity of ongoing NU equivalent the Department is transferring.

It should be noted that although the proposed transfers differ from the 2012 Determination with respect to the quantities the two individual programs plan to transfer, the overall NU equivalent volume proposed to be transferred by the Department is actually lower than that contained in the 2012 Determination. The change in the programs' proposed quantities arises from the requirement in the NNSA down-blending contract that NNSA transfer LEU equivalent to the invoiced monetary value for services, which results in higher quantities needing to be delivered to meet the same monetary values in a depressed market. Thus the proposed NNSA transfers have increased from 400 MTU NU equivalent per year to 650 MTU NU equivalent per year. The proposed EM transfers have accordingly been decreased to maintain a consistent annual level of transfers for the Department as a whole. The EM proposed transfers are thus now 2055 MTU of natural uranium per year, with up to 600 MTU per quarter, down from the 2012 Determination's 2,400 MTU per year for accelerated cleanup services. If the NNSA transfers are less than 650 MTU, then EM will transfer the remainder quantity for cleanup, keeping the combined total to 2,705 MTU annually.

Compliance with Remaining Provisions of Section 3112(d)

The Department has historically treated material not included in the Nuclear Weapons Stockpile Plan, a memorandum signed by the President that identifies uranium necessary for defense needs, as having been determined by the President as not being

necessary for national security needs. None of the material included in the proposed transactions was included in the Nuclear Weapons Stockpile Plan currently in effect.

✓ The programs have mechanisms in place to determine the value they receive for their transferred uranium, and both ensure that the Department receives a fair market value in services in exchange for the material transferred. These actions satisfy the remaining requirements of Section 3112(d).

✓ NE Conclusion and Recommendation

NE believes that factors indicated above, and the ERI analysis, support a conclusion that the Department's proposed transfers will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry. NE acknowledges that the markets are depressed, and thus recommends that they be monitored during the two-year lifespan of this Determination.

**SENSITIVITIES:**

Stakeholder Criticism of Transfers

Many stakeholders, including the Uranium Producers of America (UPA), ConverDyn, and other companies, as well as these stakeholders' respective Congressional delegations, are expected to be concerned about the impact of the planned transfers on the domestic uranium industries. The Department, at multiple levels, has met with members of the uranium, conversion and enrichment industries. In addition to less formal interaction at industry events and conferences, formal meetings in the last year have involved the UPA, ConverDyn, Fluor, USEC Inc., and URENCO USA. The nuclear fuel industries are concerned with the current state of the markets. However, uranium production and conversion industry representatives generally provide anecdotal evidence that inaccurately represents the impact of the DOE transfers on these industries.

✓ It is likely that some of the stakeholders discussed above will disagree with the ERI market impact analysis and the DOE conclusions supporting the transfers. It is worth noting, however, that these stakeholders have noted that their own projections and analysis have been no more accurate than that conducted by ERI in the past. This is an unavoidable fact of forward-looking projections. The improved transparency and thoroughness of the current ERI analysis may allay some of these criticisms.


Past ERI analysis reports have included a statement of whether the planned transactions constitute an adverse material impact on the domestic industries. This practice has contributed a perception that the Department "rubber stamps" ERI's report, adopting their conclusion as our own. NE clarified to ERI prior to initiating their analysis that the Department was not seeking such a determination from ERI, only quantification of potential impacts, as the Determination is the Secretary's alone. NE has documented its

review of ERI's analysis and a number of other factors considered (Attachment C) to support this Determination package and demonstrate independent analysis.

#### Government Accountability Office Scrutiny

The Government Accountability Office (GAO) recently completed an audit of certain DOE uranium transactions, and its draft report contained criticisms of the thoroughness of prior ERI analyses and the robustness of DOE's own internal review of the impact of its transactions. DOE has worked with ERI for this analysis to be more transparent and clear regarding ERI's assumptions and analytical process. In addition, ERI clearly engaged with the affected industries and took their views into account in its analysis. Finally, DOE has worked to more thoroughly document its internal review process to demonstrate the robustness of this review and the foundation for its recommendation for the Determination. GAO is frequently tasked with review of DOE uranium transactions and frequently critical of the manner in which they are conducted.

#### Prior NNSA Transfers

 The NNSA down-blending program inadvertently exceeded in 2013 the 400 MTU per year transfers covered by the 2012 Determination in CY 2013. The NNSA transfers totaled 452 MTU in CY 2013. NNSA notes that the first transfer of the year of 52 MTU, covering a December 2012 invoice, could have been paid in 2012, when NNSA's transfers for the year were 189 MTU NU equivalent for that calendar year, well below the 400 MTU allowed. This is not highlighted in the ERI report, but it will not be viewed favorably by the stakeholders or Congressional critics of these transactions. DOE has taken steps to ensure this will not occur in the future, including training for the program staff involved with the transfers and improved tracking and reporting including setting up a process whereby transfers are reported to NE for tracking the actual amounts against the amounts covered in Secretarial Determinations. In addition, NNSA is now required to send notifications to Congress of its upcoming transfers (EM has been required to send these letters for two years), which will increase the transparency of the program and the accountability of the Department to maintain its transfers within the bounds approved by the applicable Secretarial Determination.

#### Decreased Annual Levels of Uranium Transfers

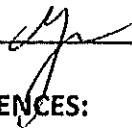
The 2012 Determination covered up to 2,800 MTU per year of natural uranium NU and/or NU equivalent for transfers in CY 2012-2014. The Department has reduced its planned transfers slightly and proposes to transfer or sell up to 2,705 MTU per year of NU and/or NU equivalent for transfers in CY 2014-2016. The planned annual levels of uranium transfers are consistent with amounts analyzed in ERI's 2012 report and the current 2014 report.

#### Impact on Portsmouth/Paducah Project Office (PPPO) Funding

Uranium transfers currently constitute 46% of Portsmouth's total site budget. The price of uranium has fallen more than 25% since fiscal year 2012, resulting in decreased cleanup activities and impacts to opportunities to accelerate work. There may be an

additional reduction in MTU transferred due to increased NNSA requirements (worst case reduction from 2,400 MTU/year to 2,055 MTU/year for EM). A workforce reduction in fiscal year 2015 at Portsmouth will largely be driven by the reduction in uranium prices, along with skills mix adjustments. Increasing the Department's Budget request for Portsmouth and Paducah cleanup activities in future years would reduce this impact and demonstrate to industry that the Department is pursuing all avenues, not just relying on barter.

**RECOMMENDATION:** Approve the Secretarial Determination authorizing the transfers of the EM GDP Cleanup Program, and the NNSA Down-blending Contracts.

APPROVE:  DISAPPROVE: \_\_\_\_\_ DATE: 5/14/14

<b>CONCURRENCES:</b>	NNSA/NA-1	05/02/14
	Environmental Management/EM-1	05/05/14
	General Counsel/GC-1	05/07/14
	Chief Financial Officer/CF-1	05/02/14
	Congressional Affairs/CI-1	05/12/14
	Public Affairs/PA-1	05/02/14

**ATTACHMENTS**