

Background and Excerpts from GAO Report: Enhanced Transparency Could Clarify Costs, Market Impact, Risk, and Legal Authority to Conduct Future Uranium Transactions

Background:

When Congress privatized USEC in the 1990s, the expectation was that “It will mean the elimination of the U.S. Government from the uranium enrichment business.”¹ History has shown that the opposite has occurred, with USEC unable to avoid bankruptcy, even after repeated government bailouts.

On May 15 2012, DOE announced that it would provide tens of thousands of metric tons of uranium worth hundreds of millions of dollars to several entities in a bid to keep USEC’s Paducah facility open for another year. DOE also said² it needed to make these transfers in order to obtain tritium for the U.S. nuclear weapons program. In 2012-13, there were several additional transfers of uranium by DOE to USEC.

Section 3112 (d)(2)(B) of the USEC Privatization Act requires the Secretary of Energy to determine that a proposed sale of uranium from its inventory “will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry.” DOE has historically concluded³ that “as a general matter, the introduction into the domestic market of uranium from Departmental inventories in amounts that do not exceed ten percent of the total annual fuel requirements of all licensed nuclear power plants should not have an adverse material impact on the domestic uranium industry.” However, the DOE’s uranium transfer plans, which include the May 2012 transfer of depleted uranium, will result in some annual transfers that are likely to exceed DOE’s ten percent limit.

Such transfers may not always be in the financial interests of the taxpayers. A presentation related to the Department’s enriched uranium supply and demand through 2060 states that it has already designated 20 MTU of surplus Highly Enriched Uranium (HEU) for down-blending – a second method that could be utilized to produce tritium. This is separate and apart from the 160 MTU it has also set aside for the naval reactor fuel program (20 MTU of HEU could supply the country’s tritium needs for about 15 years). This same presentation also indicates that down-blending HEU (for example, by Nuclear Fuel Services) would cost taxpayers about \$388 million. By contrast, having USEC’s Paducah facility do the work would cost anywhere from \$616 million-\$1.02 billion. It thus appears that DOE selected the most expensive option it could possibly have chosen to obtain tritium.

In response to this and other concerns related to DOE’s continued subsidization of a company currently worth about \$17 million that is also in bankruptcy, then-Congressman Markey and Congressman Burgess requested a GAO investigation. The report being released by Senator Markey and Congressman Burgess is the first of two GAO reports in response to their request.

¹ Statement by William Timbers, then-President of USEC, at a February 24, 1995 House Subcommittee on Energy and Power hearing entitled “Privatization of the United States Enrichment Corporation.”

² <http://energy.gov/articles/doe-announces-transfer-depleted-uranium-advance-us-national-security-interests-extend>

³ Page 19 http://www.nuclear.gov/pdfFiles/inventory_plan_unclassified.pdf

What GAO Found

1. GAO identified legal concerns with all four of DOE's 2012 and 2013 uranium transactions.

DOE conducted four uranium transactions in 2012 and 2013 that involved USEC, primarily to ensure the availability of unobligated LEU for the production of tritium and to support USEC's development of the American Centrifuge technology.

- a. **March 2012 transaction:** GAO found that after Congress failed to provide DOE with authority to transfer \$150 million from existing funds to support USEC's development of the American Centrifuge technology, DOE entered into a uranium exchange agreement with USEC, justifying the transaction on national security grounds. Under this agreement, USEC transferred depleted uranium to DOE, along with responsibility for its disposal. This transfer enabled USEC to free up \$44 million in funding for its American Centrifuge activities. In return, USEC took obligated natural uranium from DOE and provided DOE with unobligated enriched uranium that could be used for tritium production, representing a value of \$44.4 million in enrichment services. GAO found that DOE "did not apply the proper legal requirement" for one aspect of this transaction, and as a result "did not assess its market impact." Additionally, GAO found that "DOE did not recognize the proper legal requirement to accept tails liability" for this transaction and that "as a result, DOE undercharged USEC" by about \$9 million for it.
- b. **May 2012 transaction:** GAO found that multiple contracts between DOE, USEC, TVA and Energy Northwest resulted, or will result, in large transfers of uranium potentially worth hundreds of millions of dollars. DOE expects that these transfers will supply up to 15 years' worth of tritium to DOE's nuclear weapons program, and the transaction also enabled USEC's Paducah KY facility to remain open for about an additional year. GAO found that DOE likely lacked authority to transfer the depleted uranium tails and that even if one accepted DOE's argument that the USEC Privatization Act did not prohibit the transfer and that it was generally authorized under the Atomic Energy Act, GAO found that DOE did not comply with all the Atomic Energy Act requirements.
- c. **June 2012 transaction:** GAO found that DOE accepted \$87.7 million in disposal liability from USEC for depleted uranium tails in order to fund USEC's American Centrifuge technology. GAO found that "DOE did not recognize the proper legal requirement to accept tails liability" for this transaction.
- d. **March 2013 transaction:** DOE transferred the unobligated enriched uranium it received from USEC in March 2012 back to USEC, despite DOE's original assertion in March 2012 that the transfer was necessary for national security. GAO found that DOE failed to obtain a legally required Presidential determination that the material it transferred to USEC was not necessary for national security needs prior to undertaking the transaction.

2. GAO identified issues concerning DOE’s methods for valuing tails and whether DOE received reasonable compensation with respect to its largest transaction.

GAO found that DOE does not have guidance for determining the value of tails when they are treated as an asset in a transaction, and as a result, DOE’s estimated value of the tails ranged from \$0 to \$300 million. DOE essentially decided that the tails had no value in the large May 2012 uranium tails transaction, and therefore, the transaction had no cost to the department. But, in other instances, DOE did determine when it was attempting to sell uranium tails that they had value. Without consistent guidance for how to value its tails for transactions, DOE cannot ensure the government will be reasonably compensated, as required if, as DOE asserts, the legal authority to engage in these transactions rests in the Atomic Energy Act.

For its largest May 2012 uranium transaction, GAO found that DOE was not a party to three of the five agreements between the involved parties, and that DOE told GAO that they had not “seen or reviewed any of the three third-party contracts, even though the benefits to DOE would be compromised if any of these third-party contracts were not fully performed.” GAO also found that “DOE did not take steps to mitigate risks it did identify that may prevent DOE from eventually receiving the expected benefit of the transaction” even though it identified many of these risks and even though the entire purpose of the transaction was, according to DOE, predicated on a national security need.

3. The studies DOE used to justify its uranium transactions may be problematic.

According to GAO, “DOE contracted for two studies in 2012 and 2013 to support required determinations by the Secretary of Energy that certain uranium transfers would not have an adverse material impact on the domestic uranium market” and posted these studies on its website. However, DOE did not take steps outlined in its contracts or in departmental quality assurance guidance to ensure the quality of these studies. For example, the studies provided only limited detail about their methodology and data sources; however, DOE’s quality assurance guidance states that DOE information disseminated to the public should contain such information. GAO also identified shortcomings in the studies that raise questions about the definitiveness of the studies’ conclusions” that form the basis of Secretarial determinations that departmental uranium transfers have no adverse material impacts on domestic uranium markets.

DOE recently used a similar study⁴ to justify uranium transfers it plans to make in the future, the proceeds of which will be used in part to support DOE clean-up activities.

⁴ <http://energy.gov/articles/energy-department-announces-secretarial-determination-no-adverse-material-impact-uranium>