

Federal Subsidies for the United States Enrichment Corporation



July 2013

The United States Enrichment Corporation (USEC) was established in 1992 as a wholly-owned federal entity until it was privatized in 1998. Over the last five years, USEC has experienced massive financial troubles; its stock has dropped sharply, and it has become increasingly reliant on taxpayer subsidies to stay afloat. Below is a brief summary of USEC's troubles and its recent taxpayer support.

Background and Financial Outlook

USEC was originally established in 1992 to replace the Uranium Enrichment Enterprise (UEE) and restart the Department of Energy's efforts to commercialize gas centrifuge technology.¹ Today, USEC has two principal concerns:

- **Construction and operation of its American Centrifuge Project in Portsmouth, OH.** The project's goal is to prove the commercial viability of gas centrifuge technology.
- **Operation of the Paducah Gaseous Diffusion Plant in Paducah, KY.** This plant has provided uranium enrichment services for more than 60 years, but it recently announced it will close its doors in May 2013, when the federal government will start the process of taking back control of the plant.²

Since USEC's privatization in 1998, the company has experienced massive drops in stock prices and repeatedly downgraded credit ratings. USEC's credit rating has dramatically fallen over the past five years as the company has experienced major financial and technical issues surrounding the construction of the American Centrifuge Project. In December 2009, Moody's Credit Rating Service awarded USEC a junk bond status—the company's fourth consecutive credit downgrade since 2002.³ Standard and Poor's downgraded the company's credit rating to junk bond status in May 2012.



USEC has repeatedly faced the threat of delisting from the New York Stock Exchange (NYSE). USEC's stock value fell to less than \$1 on multiple occasions since 2011, prompting the first delisting notice from the NYSE.⁴ Unless the company could maintain a minimum average of \$1 over a 30-day period its stock would be delisted. At its annual stockholder meeting on June 27, USEC management received approval by its shareholders to implement a reverse stock split (i.e. artificially raising share prices by reducing the amount of outstanding shares) in order to keep company stock above \$1.⁵ In April, USEC received a second delisting notice due to its low market capitalization, or company value. NYSE regulations require USEC's total value to maintain a value of \$50 million or above over any 30-day period. Shortly after, USEC formally notified the NYSE that it intends to "cure this deficiency." USEC was

given 45 days to submit a final business plan to raise its value above the NYSE threshold over the next 18 months.

USEC faces additional challenges. Both of its primary enrichment service contracts are coming to an end this year. First is a 20-year ‘Megatons-to-Megawatts’ contract with Russia’s state-owned Technobexport (TENEX) under a 1993 intergovernmental nonproliferation agreement. USEC signed second 10-year contract with TENEX, but it will make up only half of the previous contract amounts.⁶ USEC’s second main contract to expire is with the federally-owned Tennessee Valley Authority and Energy Northwest; it ends later this month. Finally, USEC has been in discussions with DOE about handing back operations of the federally-owned Paducah site earlier than expected. The lease is currently set to expire in 2016, but according to company documents, USEC expects the de-leasing process to be finalized in 2014.⁷ Operating since 1952, USEC’s Paducah gaseous diffusion plant is widely-known to require substantially more power to enrich uranium than its competitors.

The American Centrifuge Project

Following the USEC Privatization Act of 1996, USEC shifted focus from its gaseous diffusion plants¹ to developing the American Centrifuge Project to pursue “commercially viable” gas centrifuge technology. In September 1999, DOE granted USEC the right to use its gas centrifuge technology. Soon after, DOE and USEC signed a memorandum of agreement (MOA) that the federal government would support USEC’s operations at the Paducah gaseous diffusion plant² until the American Centrifuge Plant reached commercial operation.



In 2002, USEC announced it had chosen the 300-acre Portsmouth site in Piketon, Ohio as the site for its American Centrifuge Plant. Initial capital costs for the project were estimated at \$1.7 billion, with the first commercial operation date expected in 2005.⁸ DOE assumed three years worth of depleted uranium liabilities (see sidebar) valued at approximately \$21 million in order to free up funds for USEC to invest in research and development. Three years later, USEC announced capital costs for the plant had risen from \$1.7 to \$2.3 billion and the commercial operation date was delayed

Depleted Uranium Liabilities

The uranium enrichment process produces radioactive waste. USEC is required to maintain funds to pay for the disposal of the waste bi-products. From 2009 to present day, DOE has taken responsibility for more than \$100 million of depleted uranium liabilities from USEC.

¹ As part of the privatization process, USEC leased the federally-owned, privately operated Paducah and Portsmouth nuclear ‘reservations’ located at Paducah, Kentucky and Piketon, Ohio, respectively. These sites also housed the Paducah Gaseous Diffusion Plant and the Portsmouth Gaseous Diffusion Plant.

² In 2001, USEC cancelled operations at the Paducah site however it remained in ‘cold standby’ mode for many years. In August 2010, DOE provided \$2.1 billion to Fluor-B&W Portsmouth, LLC—a joint-venture between Fluor Corporation and Babcock & Wilcox—for the continued cleanup and decommissioning of the Portsmouth site.

until 2009.⁹

Construction on the American Centrifuge Plant began in May 2007 upon receipt of a combined construction and operating license from the U.S. Nuclear Regulatory Commission (NRC).¹⁰ In 2008, USEC once again announced an increase in capital costs from \$2.3 to \$3.5 billion¹¹ and pushed back the commercial operations date until 2010.¹²

Today, USEC says it could need another \$2.8 billion to construct the American Centrifuge Plant after it has already invested more than \$2.3 billion. The plant, originally projected to cost \$1.7 billion and reach commercial operations in 2005, is now expected to cost nearly \$5 billion and reach commercial operations in 2017.¹³

Keeping USEC Afloat

In one attempt to revive USEC's American Centrifuge Plant, DOE and USEC agreed to a two-year cooperative research, development, and demonstration (RD&D) partnership worth \$350 million in June 2012.³ While the support is touted by proponents to be a cost-sharing agreement, USEC is only required to provide 20 percent of funding while taxpayers are forced to provide the remaining 80 percent. Initial funding was provided by DOE assuming title to \$87.7 million worth of USEC's depleted uranium liabilities. A second installation of \$100 million was later provided by the continuing appropriations bill that was enacted in September 2012 and extended in March 2013. Early last year, DOE assumed an additional \$44 million worth of depleted uranium liabilities from USEC last year, "due to constraints on USEC's ability to continue to spend on the [American Centrifuge Plant]." ¹⁴ An equal amount of uranium was transferred from USEC to DOE in compensation, but USEC expects this to "be returned to USEC as part of DOE's cost share under the RD&D program." ¹⁵

As part of the cooperative agreement, USEC no longer leads operations of the demonstration project and step-in rights⁴ were provided to DOE in the event the project ultimately fails. USEC formed a subsidiary entitled American Centrifuge Demonstration, LLC (ACD) which will now oversee development of the American Centrifuge Plant. ACD will lead the RD&D program operations, and is composed of an independent board of managers including representatives from NRC, Savannah River Nuclear Solutions, LLC (a joint-venture managed by Fluor Corporation, Honeywell International, and Huntington Ingalls Industries), Exelon Corporation, Babcock and Wilcox, Toshiba Corporation, and USEC to. As a result, USEC no longer has full control of operations.¹⁶ "Step-in" rights to use gas centrifuge technology were also provided to DOE in the event that the demonstration plant fails in which case DOE would take over the project.

Between 2009 and 2011, USEC received six separate transfers of taxpayer-owned uranium from DOE valued at more than \$194 million, which USEC then sold for profit.¹⁷ The Government Accountability Office later found these uranium transfers to be in conflict with federal law but DOE denies any wrongdoing.¹⁸

³ The RD&D program spans from January 2012 to December 2013. USEC began funding the RD&D program as early as January 2012, according to company documents.

⁴ Step-in rights allow the Department of Energy to take over if the project fails or USEC is unable to commercialize gas centrifuge technology.

USEC also recently suffered significant technical problems as well. NRC reported in April 2012 that six of the 38 uranium enrichment machines, which are based on a DOE design, “crashed” in what was supposed to be a routine test.¹⁹ The failure set USEC back \$9 million but demonstrated that the technology is still not commercially viable.

DOE Loan Guarantee

USEC is seeking a loan guarantee for its American Centrifuge Plant through the Department of Energy Title XVII Loan Guarantee Program, authorized in the Energy Policy Act of 2005. In July 2008, USEC applied for a \$2 billion loan guarantee to support the development of its demonstration plant in Piketon, Ohio. While proponents of the plant argued that the plant was economically viable and a safe investment for taxpayers, DOE was not convinced.

In July 2009, DOE requested that USEC withdraw its loan guarantee application citing “the project runs the risk of either major cost overruns or [technological] reliability problems or both.”²⁰ This did not stop DOE from offering USEC a consolation \$45 million through a cooperative agreement to continue research and development. Under the agreement, taxpayers took title to another \$45 million worth of USEC’s depleted uranium liabilities. USEC initially rejected the offer²¹ but ultimately accepted the taxpayer support within a year.²²

Following the denial of the \$2 billion loan guarantee by DOE in 2009, USEC refused to withdraw its application stating a “loan guarantee ... is essential to obtaining the funding needed to complete the American Centrifuge Plant.”²³ USEC threatened to cancel the project but ultimately continued operations.²⁴ In July 2010, USEC re-submitted its loan guarantee application after signing an agreement with Babcock & Wilcox and Toshiba to provide \$200 million in private capital⁵ for the American Centrifuge Project, even though it had not addressed any of the technical issues cited by DOE.

DOE Title XVII Loan Guarantee Program: Taxpayer Risks

Passed as part of the Energy Policy Act of 2005, this Title XVII Loan Guarantee Program currently has \$34 billion in loan guarantee authority available for nuclear, renewable, energy efficiency, and “clean” coal projects.

For nearly five years, USEC has sought at \$2 billion loan guarantee for its American Centrifuge Plant in Portsmouth, Ohio. The loan guarantee was nearly denied in 2009 but proponents on Capitol Hill convinced DOE to continue its process with USEC. However recent reports from the Government Accountability Office indicate the USEC application is not currently under consideration at DOE.

According to a March 2013 Government Accountability Office (GAO) report, USEC’s \$2 billion loan guarantee application is ‘inactive.’²⁵ Shortly before the release of the report, however, USEC stated it will continue to seek a loan guarantee and intends to update its application in 2013.²⁶ Furthermore, DOE repeatedly says it intends to utilize all of the remaining spending authority under the DOE loan guarantee program, including uranium enrichment.²⁷

⁵ The agreement would provide USEC with an initial \$75 million and additional funds once DOE approves USEC’s loan guarantee application for no less than \$2 billion.

Taxpayer Concern

Due to USEC's poor credit rating and small capitalization value, private investors have been and will continue to be reluctant to make investments in the \$4.8 billion American Centrifuge Plant, more than 100 times the current market value of the company.²⁸

Bailout after bailout, federal taxpayers have been forced to hand over hundreds of millions of dollars to a project that is eight years behind schedule and \$3.1 billion over initial cost estimates.

USEC's financial troubles have even caught the attention of the Department of Treasury. In October 2011, the Treasury stated that when dealing with further funding of USEC, "extreme care should be taken in putting the taxpayer at risk or offering any exposure to the taxpayer."²⁹

"Extreme care should be taken in putting the taxpayer at risk or offering any exposure to the taxpayer."

- Gary Grippo, Deputy Assistant Secretary for Fiscal Operations and Policy, U.S. Department of Treasury, in reference to USEC's loan guarantee

However, determined to continue financial support to USEC, DOE has invested more in USEC than the company's present value. The fact that USEC requires steady financial support is indicative of the riskiness inherent in the project. Taxpayers can no longer be tied to this sinking ship.

For more information, visit www.taxpayer.net
or contact Autumn Hanna at (202)-546-8500 x112 or [autumn\[at\]taxpayer.net](mailto:autumn[at]taxpayer.net)

¹ Created in Title IX of the Energy Policy Act of 1992 (P.L. 102486). <http://www.fas.org/spp/starwars/crs/95-111.htm>

² Matthew Wald, "Kentucky Operator to Cease Enrichment of Uranium." May 2013. *New York Times*.

http://www.nytimes.com/2013/05/25/business/usec-to-shut-uranium-enrichment-plant-in-kentucky.html?_r=0

³ Moody's Investor Services, Inc., "USEC Inc." Org ID: 600045828. <http://www.moodys.com/credit-ratings/USEC-Inc-credit-rating-600045828>

⁴ USEC Inc., "USEC Receives Continued Listing Standards Notice from the New York Stock Exchange." May 2012.

<http://www.usec.com/news/usec-receives-continued-listing-standards-notice-new-york-stock-exchange>

⁵ USEC Inc., Third quarter 2012 report (10-Q) on company's financial position. <http://services.corporate-ir.net/SEC/Document.Service?id=P3VybD1hSF1wY0RvdKwyRndhUzUwWlc1cmQybDZZWEprTG1OdmJTOWtiM2R1Ykc5aFpDNXdhSEEvWVdOMGFXOXVQVkJFUmlacGNHRm5aVDA0T1RNM05Uz3hKbk4xWW5OcFpEMDFOdz09JnR5cGU9MiZmbj1VU0VDSW5jLnBkZg==>

⁶ USEC Inc., "USEC Signs Multi-Year Contract with Russia's TENEX for Low Enriched Uranium Supply." March 23, 2011.

<http://www.businesswire.com/news/home/20110323006720/en/USEC-Signs-Multi-Year-Contract-Russia%E2%80%99s-TENEX-Enriched>

⁷ USEC Inc., First quarter 2013 report (10-Q) on company's financial position. <http://services.corporate-ir.net/SEC/Document.Service?id=P3VybD1hSF1wY0RvdKwyRndhUzUwWlc1cmQybDZZWEprTG1OdmJTOWtiM2R1Ykc5aFpDNXdhSEEvWVdOMGFXOXVQVkJFUmlacGNHRm5aVDA0T1RBM05Uz3hKbk4xWW5OcFpEMDFOdz09JnR5cGU9MiZmbj1VU0VDSW5jLnBkZg==>

⁸ USEC Inc., "USEC to Site American Centrifuge Plant in Piketon, Ohio." January 12, 2004. <http://www.usec.com/news/usec-site-american-centrifuge-plant-piketon-ohio>

⁹ *World Nuclear News*, "Usec revises costs, capacity and schedule for enrichment plant." February 12, 2007. <http://www.world-nuclear-news.org/newsarticle.aspx?id=12886>

¹⁰ U.S. Nuclear Regulatory Commission. "USEC Inc. Gas Centrifuge." <http://www.nrc.gov/materials/fuel-cycle-fac/usecfacility.html>

¹¹ USEC Inc., "USEC Updates Progress on American Centrifuge Project." February 25, 2008. <http://www.usec.com/news/usec-updates-progress-american-centrifuge-project>

¹² USEC Inc., "USEC Provides American Centrifuge Update." November 2, 2009. <http://www.usec.com/news/usec-provides-american-centrifuge-update>

¹³ Brian Wingfield, "Boehner Demands \$2 Billion for Ohio Plant After Solyndra." October 27, 2011. *Bloomberg*.

<http://www.bloomberg.com/news/2011-10-27/boehner-wants-2b-for-ohio-plant-post-solyndra.html>

¹⁴ USEC Inc., First quarter 2012 report (10-Q) on company's financial position. <http://services.corporate-ir.net/SEC/Document.Service?id=P3VybD1hSF1wY0RvdKwyRndhUzUwWlc1cmQybDZZWEprTG1OdmJTOWtiM2R1Ykc5aFpDNXdhSEEvWVdOMGFXOXVQVkJFUmlacGNHRm5aVDA0T1RBM05Uz3hKbk4xWW5OcFpEMDFOdz09JnR5cGU9MiZmbj1VU0VDSW5jLnBkZg==>

¹⁵ USEC Inc., First quarter 2012 report (10-Q) on company's financial position. <http://services.corporate-ir.net/SEC/Document.Service?id=P3VybD1hSFlwY0RvdKwyRndhUzUwWlc1cmQybDZZWEprTG1OdmJTOWtiM2R1Ykc5aFpDNXdhSEEvWVdOMGFXOXVQVkJFUmlacGNHRm5aVDA0TWpNMU5gWTJKbk4xWW5OcFpEMDFOdz09InR5cGU9MiZmbj1VU0VDSW5jLnBkZg==>

¹⁶ USEC Inc., "Research, Development & Demonstration Program." <http://www.usec.com/american-centrifuge/what-american-centrifuge/rdd-program>

¹⁷ U.S. Government Accountability Office, "Excess Uranium Inventories: Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations." September 2011. <http://www.gao.gov/assets/590/585406.pdf>

¹⁸ U.S. Government Accountability Office, "Excess Uranium Inventories: Clarifying DOE's Disposition Options Could Help Avoid Further Legal Violations." September 2011. <http://www.gao.gov/assets/590/585406.pdf>

¹⁹ Gregory Korte, "Politics stands in the way of nuclear plant's future." April 27, 2012. *USA Today*.

<http://usatoday30.usatoday.com/money/industries/energy/story/2012-04-13/usec-centrifuges-loan-guarantees/54560118/1>

Frank Lewis, "Congressman to DOE: Stop supporting USEC." *Portsmouth Daily Times*. http://www.portsmouth-dailytimes.com/view/full_story/17269066/article-Congressman-to-DOE--Stop-supporting-USEC?instance=home_news_lead#ixzz2JbfCzYYJ

²⁰ Steven Mufson, "USEC Is Denied Loan Guarantees; CEO Accuses Obama of Reneging." July 29, 2009. *The Washington Post*.

<http://www.washingtonpost.com/wp-dyn/content/article/2009/07/28/AR2009072802617.html>

²¹ Jonathan Riskind, "USEC: It's guarantee or nothing," *The Columbus Dispatch*, July 30, 2009.

http://www.dispatch.com/content/stories/local/2009/07/30/usecletter.ART_ART_07-30-09_B1_RNEKEGO.html

²² USEC Inc., "USEC and DOE Fund Continued American Centrifuge Activities." March 23, 2010.

<http://www.businesswire.com/news/home/20100323007162/en/USEC-DOE-Fund-Continued-American-Centrifuge-Activities>

²³ USEC Inc., "Funding." <http://www.usec.com/american-centrifuge/what-american-centrifuge/plant/funding>

²⁴ Urenco Inc., "US enrichment plant denied loan guarantee." July 28, 2009.

<http://www.ureenco.com/content/242/US-enrichment-plant-denied-loan-guarantee.aspx>

²⁵ U.S. Government Accountability Office, "Status of Loan Programs." March 15, 2013. <http://www.gao.gov/products/GAO-13-331R>

²⁶ USEC Inc., "USEC Reports Financial Results for the Fourth Quarter and Full Year 2012." March 18, 2013. <http://www.usec.com/news/usec-reports-financial-results-fourth-quarter-and-full-year-2012>

²⁷ U.S. Government Accountability Office, "Status of Loan Programs." March 15, 2013. <http://www.gao.gov/products/GAO-13-331R>

²⁸ On June 24, 2013, USEC's market capitalization was valued at \$38.44 million while the American Centrifuge Plant was estimated to cost \$4.8 billion—a ratio of 125:1.

²⁹ Gary Grippo, U.S. Department of Treasury, before the House Energy and Commerce Committee on October 14, 2011. Video of the hearing can be found here: <http://www.youtube.com/watch?v=G1gP0xp3DBA&feature=share&list=UUT1ujew5yQy2uMhGrijKHoa>