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Good morning. My name is Robert Van Namen, and I am senior vice president, Uranium Enrichment at USEC Inc., a leading supplier of low enriched uranium for commercial nuclear power plants. Thank you Chairman Gordon, Ranking Member Hall and members of the committee for inviting me to testify on the current status of America's supply of uranium and nuclear fuel and the industry's ability to meet additional demand for fuel as the country prepares to increase its use of nuclear power.

Today's U.S. nuclear fuel supply industry is in transition. While it is in better shape than it was a decade ago, much work remains to be done and substantial investments need to be made before it can fully support the expansion of nuclear power in our country. Domestic fuel companies constructing new facilities face stiff competition in a market dominated by foreign, vertically integrated firms, many of which benefit from the financial and political support of their governments. As we work to increase our domestic fuel supply capacity, U.S. companies supplying the nuclear fuel cycle need the assurance that their investment of resources will receive the support necessary to revive the industry to a long-term, self-sustaining position. We must rebuild and expand our domestic fuel cycle infrastructure to put us in a position of self reliance for the future.

While America still leads the world in the amount of electricity produced by nuclear power, we long ago gave up our industry leading position on nuclear technology. Unless we take steps now to reclaim a leadership position, we will lose our ability to affect nuclear's future expansion and use worldwide or even in our own country. Now is the time for the U.S. government to encourage the efforts of our domestic companies to rejuvenate the U.S. nuclear fuel cycle so it can meet the demand of an expanded nuclear power generating capacity in the decades to come.

U.S. Uranium Supply

Let me start with the beginning of the fuel cycle, the mining and milling of natural uranium. Since 1994, domestic sources have provided an average of about 18 percent of the natural uranium purchased by U.S. reactor operators. Our production of uranium began to decline in the mid-1990s as a flood of government inventories and material from countries in the former Soviet Union depressed prices to levels that made it uneconomical to produce the material domestically. The dimming prospects for future nuclear reactors being constructed also dampened prices and the prospects for future demand growth.

But today the situation has changed somewhat for the better. Since 2003, the price of uranium has risen from about $10 a pound up to more than $95 for long-term contracts. At this

price, domestic miners have begun the process to expand or restart existing mines. NRC expects applications for 20 new mines to be filed by 2011. Concurrently, production has increased to about 5 million pounds a year at existing mines.

However, even if domestic production of uranium expands immensely, it is unlikely that we would ever be able to supply all our needs with domestic production. Fortunately, the countries with the greatest uranium reserves, Canada and Australia, are close allies of the United States, reducing chances of supply disruptions. Additionally, the U.S. Department of Energy maintains an enormous inventory of uranium in various commercial and non-commercial forms. This inventory can supply limited regular demand as well as serving as a strategic reserve in case of supply disruptions. The department is working on the details of a long-term policy for handling its inventory, which would bring much needed clarity to the role of these sales in the market.

U.S. Conversion Supply

The second step in the fuel cycle is the conversion of natural uranium to uranium hexafluoride. Unlike uranium mining, the lone U.S. supplier of conversion services can meet the majority of U.S. demand. The Converdyn plant in Illinois has recently expanded and can now meet about 80 percent of annual U.S. demand. Historically, conversion plants have been able to expand in step with increased demand, and the world has an overcapacity of conversion services available at facilities in Canada, the United Kingdom, France and Russia. Additionally, companies have expressed some interest in building more plants or adding onto their existing capacity at conversion facilities in these countries. A secondary source of conversion lies in the large quantity of uranium in inventories such as DOE's that have already been converted to uranium hexafluoride.

U.S. Low Enriched Uranium Supply

After conversion, uranium must be enriched to raise the concentration of the fissionable isotope U^{235} from its natural state of less than 1 percent to the 4 to 5 percent required for commercial nuclear reactors. The United States has one operating uranium enrichment plant, the Paducah Gaseous Diffusion Plant in Paducah, Kentucky, which USEC operates under lease from DOE. In 2008, we expect to produce approximately 6 million SWU at the plant. A SWU, or separative work unit, is the industry unit of enrichment. The annual fuel requirements of a typical reactor require about 100,000 SWU and 900,000 pounds of uranium. Annual U.S. demand ranges between 12 to 14 million SWU a year. USEC shut down Paducah's sister plant in Piketon, Ohio, in 2001 in the face of dumping of foreign commercial LEU and to accommodate increased supply of LEU from downblended Russian nuclear warheads through the Megatons to Megawatts program.

U.S. reactors currently depend upon foreign sources for the majority of their LEU. The supply comes from three major sources: LEU from the Paducah plant, about 12 percent, the Megatons program, about 43 percent, and from European producers, about 43 percent. But that is about to change.

Worldwide, the enrichment industry is transitioning from production based on a mix of gaseous diffusion and gas centrifuge technologies to one based almost solely on gas centrifuge over the next ten years. In the United States, USEC and a subsidiary of Urenco, a European enrichment company, are each building gas centrifuge plants as I speak. Combined, these plants will have an initial capacity of just under seven million SWU.

Other companies, such as GE-Hitachi and the French conglomerate Areva, are also contemplating building plants here, although neither has applied for a license, selected a site, or made any other definitive commitment to build yet. If all four plants are constructed, it would provide enough LEU capacity for current and potential increases in U.S. demand. Additionally, based on current SWU prices, the Paducah GDP can run past its planned shutdown in 2012 to fill any supply gaps should the market require the additional supply.

I would like to speak for a moment about our American Centrifuge Plant. The ACP is the only plant to use U.S. centrifuge technology. USEC's centrifuge machine, the AC100, is based on a design by DOE from the 1980s, but with vast improvements in performance, materials and manufacturing processes. Because the ACP will be owned and operated by a U.S. company, it does not face the restrictions imposed on the foreign centrifuge and laser enrichment technologies that will be used in the other plants. USEC's development and manufacturing work is based in Oak Ridge, Tennessee, where we have been working since 2001 to resurrect the U.S. technology. Manufacturing of machine components will also take place in West Virginia, Indiana, Ohio and other states. Constructing the plant increases domestic capacity while also rebuilding an American industrial base for manufacturing a highly advanced nuclear technology.

One major advantage of gas centrifuge over gaseous diffusion is its modularity. As new contracts for LEU are signed with utilities, a plant can be expanded to meet demand in increments. So while our initial planned capacity for the American Centrifuge Plant is 3.8 million SWU, our Environmental Impact Statement approved as part of our NRC license covers the potential expansion of the plant to approximately double this size. If nuclear power grows as some predict, we could eventually expand the plant to four times its original size based on the available land at the site. So if we see a number of new reactors licensed and constructed, we believe we will have the ability to expand the plant in order to meet the emerging demand.

However, several threats to the expansion of the U.S. LEU capacity exist. One major issue is the availability of timely and adequate financing for construction in light of current credit market conditions and uncertainty regarding the timing of any loan guarantees from DOE. In particular, USEC would like to utilize DOE's loan guarantee program to assist with debt financing for the American Centrifuge Plant. DOE needs to move quickly to award guarantees once applications are received. Given the current credit crisis, such guarantees may be necessary to receive financing that makes the plant economical for investors.

The companies building here also need to be able to compete on a level playing field, shielded from uncontrolled dumping of foreign imports of uranium and LEU. The potential for Russia to dump LEU on the U.S. market is particularly on the minds of those of us investing here, as witnessed by the Senate hearing on the matter last month.

Other threats include the increasing costs for material and labor, the costs for recreating a manufacturing base in the U.S. to make centrifuge machines and plant components, and the need to develop a skilled labor pool to build and operate the facilities. Utilities considering building new reactors face many of these same challenges.

So if conditions permit, we may see a large and diverse domestic enrichment industry within five to ten years, one that could support the expansion of our nuclear fleet.

U.S. Fuel Fabrication

The final portion of the fuel cycle, fuel fabrication, is served by several plants in the United States, only one of which is owned by a U.S. company, and currently the market has much more supply than demand. While each reactor vendor used to be the sole source for fuel assemblies for the reactors they built for customers, today each vendor's plant can make fuel assemblies for reactors designed by competitors, leading to the current glut. If new reactors are built here, the existing fabrication facilities should have enough capacity to meet any new demand.

The Role of the U.S. Government in Expanding the Use of Nuclear Power

I would like to close by discussing the role that the U.S. government can and should play in expanding the use of nuclear power domestically, specifically in assisting the expansion of our domestic fuel supply.

First, a few of the positives that have gotten us to this point are worth mentioning. Congress has enacted legislation, such as the Energy Policy Act of 2005, that has spurred utilities to consider building the first new plants in 30 years. In addition, the regulatory uncertainty of the NRC licensing process has been simplified and tested. For instance, USEC and Urenco's subsidiary LES have both successfully applied for and received construction and operating licenses for new enrichment facilities. These are the first new nuclear facility licenses issued by NRC in several decades. NRC has also worked vigorously to increase its staff in order to handle the tens of applications for new nuclear plants, fuel cycle facilities and uranium mines that is has received and expects to receive during the next decade.

Those are some of the positives, but the need for government action remains. Despite legislation passed by Congress to encourage the expansion of nuclear power, the implementation of legislative directives at the agency level has often been out of step with real-world timeframes. The delay in implementing the Loan Guarantee program, for instance, may prevent new nuclear facilities from coming online as soon as possible because companies may have to delay or cancel their projects. The NRC also faces a funding shortfall from its budget request that may force it to defer or delay the review of applications for new projects.

Specifically in nuclear fuel, domestic producers need legislative support to backup the Russian Suspension Agreement Amendment to ensure that the U.S. government can enforce recently agreed terms that allow measured Russian access to the U.S. market while permitting our domestic industry time to secure contracts needed to secure financing for new mines and production facilities. Additionally, near- and medium-term support for the Paducah plant with a contract to enrich DOE's high-assay tails would ensure that it remains available to meet the

needs of domestic utilities past 2012, a period when the new centrifuge facilities will be starting up operations. As mentioned before, DOE needs to complete its plan for managing and selling its uranium inventories to provide the market, and specifically miners and enrichers, clarity on how DOE's inventory will affect supply and demand during the next decade. Finally, any assistance with education, job development, and infrastructure improvements in the next few years will go a long way to assisting us with creating a stable, long-term nuclear fuel industry in the United States.

Our mutual goal in all of these activities should be to see the renewed expansion of nuclear power, America's primary source of clean, reliable emissions-free electricity. The domestic fuel industry has spent the past several years working to ensure that the fuel for new reactors will be available when they come online so that our nuclear plants can continue to provide us energy security and diversity. At USEC, we firmly believe that increasing our use of nuclear power will help our nation tackle the severe challenges we face from international energy security to the adverse effects of electricity generated by burning fossil fuels. Thank you for your time and I look forward to your questions.