

# Nuc...brief & link

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NFCC Nuclear Fuel Cycle Consulting

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*Attention! Here is the expected, attempted revolution, e.g. break with the Carter Policy: (And keep in mind; it is recycling not reprocessing or "wiederaufarbeitung" or...)*

**U.S. Secretary of Energy Samuel W. Bodman announced a \$250 million Fiscal Year (FY) 2007 request to launch the Global Nuclear Energy Partnership (GNEP)** "to expand safe, clean, reliable, affordable nuclear energy worldwide." [Fiscal Year 2007 for the U.S. Federal Government begins October 1, 2006.] Bodman: "This new initiative is a comprehensive strategy to enable the **expansion of emissions-free nuclear energy** worldwide by demonstrating and deploying new technologies to **recycle nuclear fuel**, minimize waste, and improve our ability to keep nuclear technologies and materials out of the hands of terrorists. [...] Through GNEP, the United States will work with other nations possessing advanced nuclear technologies to develop **new proliferation-resistant recycling technologies** in order to produce more energy, reduce waste and minimize proliferation concerns. Additionally, these partner nations will develop a **fuel services program to provide nuclear fuel to developing nations** allowing them to enjoy the benefits of abundant sources of clean, safe nuclear energy in a cost effective manner in exchange for their **commitment to forgo enrichment and reprocessing activities**, also alleviating proliferation concerns. [...]" Bodman said that two main goals of GNEP will be to "recycle nuclear fuel using new proliferation-resistant technologies to recover more energy and reduce waste" and to "utilize the latest technologies to reduce the risk of nuclear proliferation worldwide."

The GNEP strategy includes **seven elements**, outlined by Secretary Bodman:

- Building of a **new generation of nuclear power plants in the United States**.
- Developing and deploying new nuclear **recycling** technologies.
- Working to effectively manage and eventually **store spent nuclear fuel in the U.S.**
- Designing **Advance Burner Reactors** that would produce energy from recycled nuclear fuel.
- Establishing a **fuel services** program that would allow developing nations to acquire and use nuclear energy economically while minimizing the risk of nuclear proliferation.
- Developing and constructing **small scale reactors** designed for the needs of developing countries.
- Improving nuclear **safeguards** to enhance the proliferation-resistance and safety of expanded nuclear power.

Press release: <http://www.doe.gov/news/3161.htm>.

Transcript of the **press briefing including presentation of Deputy Secretary Sell** concerning the details of the GNEP policy: <http://www.doe.gov/news/3171.htm>. Sell said: "**The Global Nuclear Energy Partnership at its core is a way that we anticipate**

**dramatically expanding nuclear power here in the United States, but also in the world in a way which effectively addressed two of the great concerns** that have historically been associated with nuclear power here in the United States, but also in the world, in a way which effectively addresses two of the great concerns that have historically been associated with nuclear power. Those are, what do you do with the waste and what about the proliferation of technologies that can lead to the bomb. We think the Global Nuclear Energy Partnership effectively addresses both of those great questions in a way which will enhance the expansion of nuclear power worldwide." For more information on the Global Nuclear Energy Partnership go to the **comprehensive new website** of GNEP <http://www.gnep.energy.gov>. The copy of Deputy Secretary Sell's **slide presentation** (more than 10 MB):

<http://www.gnep.energy.gov/pdfs/gnepPresentationFinal020606.pdf>

DOE announced its (FY) **2007 Budget requests**: The **Office of Nuclear Energy, Science and Technology** requests \$632.7 million. In addition to the \$250 million for the Global Nuclear Energy Partnership, which is currently funded within the Advanced Fuel Cycle Initiative, the request includes Generation IV R&D (\$31.4 million) which will improve the efficiency, sustainability, and proliferation resistance of advanced nuclear systems and Nuclear Power 2010 (\$54.0 million). The **Office of Radioactive Waste Management** requests \$544.5 million for further development of the **Yucca Mountain Project**, a \$99 million increase from the final FY 2006 appropriation, excluding funds for the Integrated Spent Fuel Recycling Facilities. <http://www.doe.gov/news/3150.htm>

**The U.S. NRC released its proposed budget for Fiscal Year 2007, requesting \$777 million** – an increase of \$35 million over its FY 2006 budget. The budget reflects a decrease of about \$18 million for the Nuclear Materials and Waste Safety program in light of the **potential delay in the DOE's application for the high-level waste repository at Yucca Mountain**. It also reflects **anticipated new NPP license applications**. \$341.3 million are allocated for reactor licensing, including security reviews and activities. Release: <http://www.nrc.gov/reading-rm/doc-collections/news/2006/06-016.html> Budget: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1100/v22/>

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## **NUCLEAR POLICY**

**Russia, with U.S. backing**, has floated a plan to help energy-starved countries obtain access to nuclear power while restricting the flow of weapons-grade uranium to those who might harbor military ambitions. Under its terms, the vulnerable stages of the nuclear fuel cycle - uranium enrichment and radioactive waste disposal - would be confined to a few specialized centers in

Russia and the U.S. **"We propose setting up a network of nuclear cycle centers for enriching uranium, and ensuring equal access for all who desire to share in the work of developing nuclear technology," Putin said.** "We're talking about access without discrimination. . . . Russia is an obvious partner for resolving tasks of this kind, given the country's advanced nuclear power engineering, its scientific base, skilled personnel and developed

nuclear infrastructure," he said. President George W. Bush endorsed the U.S.-Russia partnership in his fiscal 2007 budget proposal. News: <http://www.cbc.ca/cp/world/060207/w020760.html>

USA: The **Nuclear Energy Institute welcomed** the R&D emphasis on the Global Nuclear Energy Partnership: "It is important that the nation's nuclear fuel cycle policies and programs recognize the resurgence of nuclear energy around the globe." Press release: <http://www.nei.org/index.asp?catnum=4&catid=886>

USA: **The 103 U.S. NPPs produced an estimated 783 billion kilowatt-hours** (kwh) of electricity and posted an average **capacity factor of nearly 90** percent. Last year's electricity production mark is second only to the 2004 record of 789 billion kwh, and the 89.7 percent capacity factor estimate is the third-highest level ever. Release: <http://www.nei.org/index.asp?catnum=4&catid=885>

## **URANIUM**

**The prime minister of Kazakhstan called for the country to become one of the world's top uranium producers.** Speaking at a Cabinet session, Daniyal Ahmetov said: "Kazakhstan possesses 25% of the world's uranium reserves, and we [Kazakhstan] could become one of world's largest uranium powers." <http://en.rian.ru/world/20060207/43389160.html> An **interview with Mukhtar Dzhakishev, the President of Kazatomprom**, about the company's current activities and prospects: "Our task for the next five years is to become

the **world's 'number one' uranium miner.** <http://www.kazatomprom.kz/cgi-bin/index.cgi?nc80&version=en>

## **NUCLEAR FUEL**

**EnergySolutions announced that it has agreed to acquire Duratek Inc.** Duratek will bring complementary innovation in technologies and services to EnergySolutions in the areas of waste characterization and waste minimization. "We are creating a U.S.-owned nuclear services company working in all aspects of the nuclear fuel cycle, which will bring improved operational efficiencies to our customers and better serve the needs of the government and industry in the nuclear waste management process," said Steve Creamer, President and Chief Executive Officer of EnergySolutions. <http://www.energysolutions.com/media/press2.php>

## **REACTORS, NPPs, UTILITIES**

NRC has published *Review of On-Line Monitoring Techniques for Performance Assessment*. It gives an overview of current technologies being applied in the U.S. NPPs for sensor calibration monitoring of process instrumentation channels.

**Summary and review:** <http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6895/v1/index.html>

NRC has published its report *Assessment of Void Swelling in Austenitic Stainless Steel Core Internals*. As many PWRs age and life extension of the aged plants is considered, void swelling behavior of austenitic stainless steel core internals

has become the subject of increasing attention. In this report, the available database on void swelling and density change of austenitic SSs was critically reviewed. **Summary and report:** <http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6897/>

## **NUCLEAR INDUSTRY**

**Toshiba Corp. has entered into a definitive agreement with British Nuclear Fuels plc**, under which Toshiba will acquire BNFL USA Group Inc. and Westinghouse Electric UK Limited (collectively Westinghouse hereafter). **The acquisition, valued at 5.4 billion US dollars**, substantially expands the scale of Toshiba's nuclear systems business. Toshiba expects that the nuclear plant industry to see consistent growth in coming years. **By 2020, the global market for nuclear power generation is expected to grow by 50 percent compared with today.** Upon completion of the acquisition, **Toshiba expects its nuclear power business to expand to three times today's level by 2015**, as a result of operational and technological synergies. Mr. **Atsutoshi Nishida**, President and CEO of Toshiba said, "It is with pride and pleasure that we will start to work with Westinghouse, a prominent industry leader, in the strategic growth area of nuclear power. With Westinghouse, Toshiba will be a global nuclear power business organization committed to delivering world-class nuclear power generation systems and services, backed up by proven technology, reliability and superb efficiency." **Substantial press release:** [http://www.toshiba.co.jp/about/press/2006\\_02/pr0601.htm](http://www.toshiba.co.jp/about/press/2006_02/pr0601.htm)

## **RECYCLING, MOX**

**Japan:** The town of **Genkai** in the prefecture Saga is expected to soon endorse the "pluthermal" power generation plan, which will make it the **first location to implement this method. Pluthermal, or plutonium-thermal** power generation, burns plutonium-uranium mixed oxide fuel, or MOX, made from spent fuel at nuclear reactors. News: <http://www.tmcnet.com/usubmit/2006/02/06/1348216.htm>

## **STORAGE AND WASTE**

**Slovenia: Parliament passed the government-sponsored resolution on the national program for radioactive waste management and spent nuclear fuel** for the 2006-2015 period. The Agency for Radwaste Management (ARAO) will furthermore be tasked to draw up concrete measures based on the document. The measures will in turn be adopted by the government. News: <http://www.gzs.si/eng/news/sbw/head.asp?idc=20596>

## **ORGANIZATIONS, PEOPLE**

The U.S. NRC's Director of the Office of **Nuclear Regulatory Research**, Carl Paperiello has announced his retirement. <http://www.nrc.gov/reading-rm/doc-collections/news/2006/06-017.html>

**USA: John Swailes will serve as Vice President and Plant Manager for the National Enrichment Facility (NEF)** outside Eunice, New Mexico, according to an announcement by Louisiana Energy Services. Press release:

<http://sev.prnewswire.com/oil-energy/20060206/LAM08306022006-1.html>

***AND FINALLY THIS***

After nearly a decade of pressure from openness advocates inside and outside of government, the DOE has finally

released its **history of the production of highly enriched uranium**. The report combines previously released data along with newly declassified information.

Available from the **Federation of American Scientists**:

<http://www.fas.org/sgp/othergov/doe/heu/index.html>

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