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ECA Update: October 25, 2016

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Moniz: Congress Should Authorize Interim Nuclear Fuel Storage

Morning Consult

October 24, 2016

UPCOMING EVENTS

October 2016

24-26

DOE-EM Industry Day and One-on-One Sessions for SRS M&O Contract Procurement in Augusta, GA

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DOE-EM Site Specific Advisory Board Meeting in Pojoaque, NM



Energy Secretary Ernest Moniz warned Monday that Congress and businesses need to act with more urgency to work out a medley of challenges in promoting nuclear power.

The United States is on track to experience a wave of nuclear plant retirements around 2030. Those closures will make it even harder for states to meet their goals under the Clean Power Plan if it's upheld by the U.S. Supreme Court, Moniz said at an event hosted by the Center for Strategic and International Studies.

Because raising capital and making the necessary business decisions on nuclear power is a slow process, there are only about five years left to start relicensing before many nuclear plants close. If more nuclear plants can extend their licenses to run for 80 years rather than 60, that would be "a very big deal" in terms of keeping nuclear power available, Moniz said.

This is important because the lack of a clear solution for storage of spent nuclear fuel creates a "significant headwind" for opening new nuclear facilities, Moniz said. He called on Congress to pass legislation creating an interim storage facility for spent nuclear fuel.

Moniz previously told a Senate Appropriations subcommittee the department might be allowed to store nuclear waste at a privately managed facility without congressional approval.

Even so, Moniz said Monday that it would help if Congress acted on the issue. "If Congress acted to give us the authorities — and whether public or privately held storage — we could be having a pilot facility running in not much more than five years," he said.

Plans for a permanent storage facility at Yucca Mountain in Nevada have

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**DOE-EM Community
Day for SRS M&O
Contract
Procurement in Augusta,
GA**

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**DOE-EM Site Specific
Advisory Board
Meeting in
Sun Valley, ID**

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stalled since it was designated as a storage site in 1987. That deal was made without any Nevada lawmakers present. Moniz suggested that the United States should learn from some European methods for establishing nuclear storage sites, which put more weight on local consent.

Regardless of the fate of Yucca Mountain, Moniz said interim storage facilities will have a role to play. "I believe that consolidated storage, sometimes called interim storage, is absolutely essential," Moniz said. "No matter when a geological repository is realized, interim storage should be part of the system."

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Decades-long Hanford cleanup project ends in success

Tri-City Herald

October 23, 2016



A 25-year project to suck up a cancer-causing chemical from the soil in central Hanford has ended in success.

"It's one of the longest running cleanup projects on the Hanford Site," said Karen Wiemelt, vice president of soil and groundwater cleanup for

Hanford contractor CH2M Hill Plateau Remediation Co.

Nearly 90 tons of carbon tetrachloride were removed from soil as deep as 200 feet below the ground in central Hanford.

The chemical was used in the process to recover plutonium from liquid waste at the Plutonium Finishing Plant from 1955-73, according to DOE. Carbon

**DOE-LM 10th
Anniversary of Fernald
Cleanup: "Weapons to
Wetlands: A Decade of
Difference" in
Hamilton, OH**

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**DOE-EM Site Specific
Advisory Board
Meeting in
Las Vegas, NV**

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**DOE-EM Site Specific
Advisory Board
Meeting in
Oak Ridge, TN**

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tetrachloride is more commonly known for its past use as a dry cleaning solvent.

Over the years at Hanford, hundreds of thousands of gallons of the solvent were discharged into the soil near the Plutonium Finishing Plant. They left three-quarters of a square mile of soil contaminated, with some of it reaching the groundwater more than 200 feet below the ground's surface. There, it spread to contaminate about 5 square miles of groundwater.

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Groundwater Treatment Project Advances at Paducah Gaseous Diffusion Plant

WKMS

October 21, 2016



The US Department of Energy says its marking completion of the first phase of an ongoing project to remove groundwater contaminants at the Paducah Gaseous Diffusion Plant.

Fluor, DOE's prime contractor for the former uranium-enrichment plant, has installed nine new monitoring wells in the northeast section of the PGDP compound which will relay data on levels of contaminated groundwater plumes of trichloroethene, or TCE.

TCE is an industrial solvent used to clean equipment in the early days of PGDP operations, but was discontinued in the early 1990s.

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**INVITATION ONLY
2016
Intergovernmental
Meeting with DOE in
New Orleans, LA**

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Officials say a "horse-shoe shaped" area of TCE and other contaminants extends in groundwater under the site.

In the last few years, extensive 'pump-and-treat' operations have removed contaminants from more than 3.6 billion gallons of water, with more than 4,200 gallons removed.

The project's next phase includes installing an additional 13 monitoring wells, two extraction wells, and a new treatment facility to augment existing wells.

The former USEC plant enriched uranium for more than half a century before halting production in 2013.

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Smaller Nuclear Weapons And Power Plants Under Development Hold Promise And Peril

Forbes

October 25, 2016



Nuclear technologies have long evoked grand images—from billowing mushroom clouds to massive concrete cooling towers looming above nuclear power plants. This bigness has been engrained in our very language. A person can, for example, take the “nuclear

option” – the most extreme course of action – when making a difficult decision. In anger, a person might “go nuclear,” exploding into rage.

In many ways, nuclear technologies earned their reputations for their huge scale. Since the 1950s, the size of nuclear power reactors has grown from sixty

megawatts to more than 1,600 megawatts. The nuclear bombs dropped on Hiroshima and Nagasaki in 1945 were detonated with a force equal to a whopping fifteen to twenty estimated kilotons of TNT. By 1961 the Soviet Union was already testing hydrogen bomb Tsar Bomba—equivalent to fifty megatons of TNT. That's 50,000 kilotons.

In the twentieth century, nuclear energy progress generally meant building bigger-output reactors with denser fuels. Nuclear weapons progress generally meant higher explosive yields and “yield-to-weight ratios.” Visions of progress followed bigger-is-better strategies of expansion and increase.

There were, of course, a few projects to build smaller power reactors and smaller bombs along the way. The Navy used small reactors to power submarines and aircraft carriers. From the mid-1940s to the early 1960s, the Air Force explored the idea of small-reactor-powered aircraft. During the Cold War, the U.S. developed low-yield tactical nuclear weapons like RAND Physicist Sam Cohen's neutron bomb. Still, smaller-is-better ambitions among nuclear energy and weapons scientists remained exceptions to the norm.

But, in the twenty-first century, this thinking may well be reversed.

Let's start with future nuclear reactor designs. Small modular reactor (SMR) nuclear power plants, now under development as part of a fourth generation of reactor technologies, aim to generate just 300 megawatts or less. The hope is that, someday, smaller reactors will be more cost effective and therefore a more manageable investment for a wider variety of buyers—not just huge corporations or national governments. While many disagree, advocates believe SMRs would be safer because they “need fewer operators and safety officers, less robust containment structures, and less elaborate evacuation plans.” Opponents argue that SMR designers' emphasis on investment-costs distracts nuclear companies from focusing on safety. They worry that SMRs will increase the use of nuclear energy technologies that they wish to retire in favor of more investment in renewables.

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