

NEW MEXICAN LAWMAKERS CELEBRATE THE NUCLEAR RENAISSANCE

A Nuclear Power Plant May Be Next for New Mexico

Part Two of a Three-Part Interview



New Mexico lawmakers united to praise the Nuclear Regulatory Commission on the issuance of a license for the proposed uranium enrichment plant in Lea County, New Mexico. U.S. Senator Jeff Bingaman (left), U.S. Senator Pete Domenici (center), and U.S. Congressman Steve Pearce (right).

By James Finch

Federal lawmakers patted themselves on the back, last Friday, in a joint bi-partisan news release issued by three New Mexico politicians: U.S. Senators Pete Domenici and Jeff Bingaman, and U.S. Congressman Steve Pearce. Their celebratory remarks were meant to remind voters why the politicians were in Washington – to bring their state new jobs for at least some of New Mexico’s voters. While the chorus of praise revolved around creating new jobs and bringing millions of dollars into the state’s economy, is there more behind this story, which has not yet been told?

For Senator Domenici, this was another major victory as the longest serving U.S. Senator in New Mexico’s history. The Republican Senator heads the Senate Energy and Natural Resources Committee. Domenici made his views on nuclear

energy quite clear in his book “*A Brighter Tomorrow: Fulfilling the Promise of Nuclear Energy*” (Rowman & Littlefield, 2004). He began pursuing Louisiana Energy Services to move to New Mexico in February 2003, after it became apparent Hartsville, Tennessee didn’t want uranium being enriched in their backyard.

And again, it was Domenici, whose last minute negotiations with Energy Secretary Samuel Bodman, led to the adoption of the Part 810 Waiver. The waiver allowed Louisiana Energy Services (LES) to contact foreign-owned Urenco Ltd about transferring high technology data (the gas centrifuge technology) to LES so the uranium enrichment technology could be utilized at the new facility. U.S. laws ordinarily prohibit such nuclear technology transfers, but Domenici’s intervention brought the project to the NRC approval stage. LES had been on the drawing boards since 1989, having de-

rived its name from the state of Louisiana. The LES partnership was initially formed with the intent of building its centrifuge enrichment plant in Homer, Louisiana.

Senator Domenici's impact upon the nuclear resurgence in the United States is evident to the entire industry and most politicians. He announced last year, "In 1997, I predicted the resurgence of nuclear energy in the United States. For the last eight years, I have worked to help make that renaissance a reality." Is there, perhaps, one more achievement Senator Domenici would like to add on behalf of the nuclear industry, before giving up his Senate seat? In his book, *"A Brighter Tomorrow,"* Domenici bemoans and condemns nuclear fuel reprocessing. With the advent of the Global Nuclear Energy Partnership (GNEP), Domenici may bring a nuclear power plant to New Mexico before he retires.

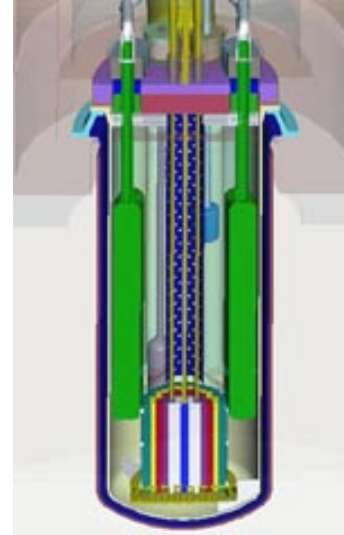
Domenici's Democratic counterpart, Senator Jeff Bingaman, is the ranking Democrat on the Senate Energy and Natural Resource Committee. We suspect Bingaman may play an integral role in helping Senator Domenici fulfill that dream. Ironically, Senator Bingaman, who last November was invited to a Santa Fe anti-nuclear environmentalist fundraiser, and which highlighted television mogul Ted Turner, was effusive in saying about the LES enrichment facility, "This will be one of the largest construction projects our state has ever seen. And the economic impact in southeastern New Mexico will be tremendous." Does Bingaman appear to be playing both sides of the nuclear chessboard?

No, the former attorney, who reportedly once provided legal advice to uranium mining powerhouse, Kerr McGee, is deftly maneuvering between being a good Democrat and providing what he may honestly believe is best for his state. While Bingaman has curried favor among the environmentalists, in May of this year, he accepted, along with Domenici and others, the William S. Lee Award for Leadership at the Nuclear Energy Institute's (NEI) annual conference, saying, "I share a belief that nuclear power can make a meaningful contribution to controlling the growth of greenhouse gases, while still allowing our economy to expand." It was his subsequent remark directed at the NEI, which leads us to believe he may be among the first to support additional nuclear growth in New Mexico. He told the NEI, "I am hoping that you will do your part to use those tools that Congress has put in place to ensure that nuclear power achieves its potential as part of our future energy mix."

The Global Nuclear Energy Partnership

In March 2006, Senator Domenici pledged his support to President Bush's Global Nuclear Energy Partnership (GNEP),

"With GNEP, we begin to close the cycle on nuclear waste in ways that prevent proliferation and reduce both the volume and toxicity of waste. By recycling spent nuclear fuel, we can reuse the uranium, which is 96 percent of spent fuel, and separate the



A concept diagram for the Advanced Burner Reactor (ABR). It may be in commercial operation as early as 2023. Perhaps, the first ABR may debut in New Mexico.

most toxic radioactive material to be burned in an advanced burner reactor. By reusing uranium fuel and burning the transuranic material in a new generation of modern reactors, we can reduce the amount of waste placed in Yucca Mountain by a factor of 100."

One of the key technologies in the GNEP program is the Advanced Burner Reactor (ABR). Deriving its technology from fast reactors, which were used to make nuclear weapons, the concept of the ABR is to minimize the amount of nuclear waste, produced by the nuclear industry's power plants, to a tiny fraction of content. The concept behind the ABR is to "burn" the transuranic elements, such as plutonium and other long-living radioactive material. In this case, burning the radioactive waste is translated as: destroying the transuranics, by converting them into shorter-lived isotopes. When the transuranic elements are consumed by the ABR, a large amount of energy is released and then converted into electricity.

Instead of burying several football fields of nuclear waste in Yucca Mountain (or elsewhere) for one million years, the toxic waste would be recycled as energy to be immediately used to power homes and industry. Part of the GNEP plan is to combine the current, or advanced, light water reactors with the ABR. As the light water nuclear reactors produce transuranics, the ABRs consume those highly radioactive elements. This leaves less nuclear waste for future disposal, and immediately provides energy.

The major issue in the western United States, about nuclear waste, is "please don't put it in our backyard." Several western states have been approached, and even the Carls-



High purity uranium oxide product recovered from used nuclear fuel using the UREX+ process. Uranium Extraction plus, or UREX+, is aimed at keeping the transuranic elements together – neptunium, plutonium, americium, and curium. This enables the reuse of the transuranics, minimizes waste, and makes the separation more proliferation-resistant

bad area was once discussed. Through the ABR technology, it may be possible to minimize the amount of this waste to make it a less undesirable disposal problem. A look at local New Mexico politics may provide an insight as to where the two U.S. senators may be heading with regards to a nuclear power plant for New Mexico.

New Mexico's Enrichment Facility: A Prelude to a Nuclear Power Plant?

If federal lawmakers are happy about the proposed uranium enrichment facility, some of New Mexico's state politicians were still floating on clouds when we talked to them yesterday. New Mexico legislator John A. Heaton, the Democratic representative serving Carlsbad, waxed enthusiastic about the enrichment facility, "It's the first step in converting this country to nuclear energy."

Mainly the four state senators and representatives, whom we interviewed, echoed each other's praise about Urenco's proposed enrichment facility. "I could not be more pleased," Senator Carroll H. Leavell told us. "It will have a major, very positive impact on the economy." At the peak of construction, as many as 1200 workers may be employed. Later, when the facility is operational, about 300 workers will remain. All four were pleasantly surprised that town hall hearings for the proposed facility were overwhelmingly positive, and the local citizens would be delighted to have this facility built in southeastern New Mexico. Senator Leavell said with disgust, "Most of the (anti-nuclear) protests have come from outside

our area, places like San Francisco, DC and Santa Fe."

Senators Leavell and Gay G. Kernan, the state senator from Hobbs, were invited by Urenco Ltd. to tour an enrichment technology plant in Almelo, Netherlands and left impressed with the company, its honesty and especially the management's attitude of looking at both sides of the issues. Both state senators also observed the surrounding community failed to be negatively impacted by the enrichment facility.

Looking for deeper insights into what the future might hold, we asked all four about the possibility of a nuclear power plant in New Mexico. All four agreed it would be desirable. Additional comments by the four state politicians led us to believe there might be a second step, following Heaton's remark about the enrichment facility being the first step.

Donald L. Whitaker, the Democratic legislator from Eunice, the closest town to the proposed enrichment facility, told us, "I would like to see a nuclear reactor in New Mexico." Whitaker has toured a nuclear facility, and believes one would be great for the state's economy. "They employ about one thousand and bring high-paying jobs," he said. Representative Whitaker was not the lone voice among his fellow eastern New Mexican legislators.

"Yes, we want a nuclear reactor in New Mexico," Representative Heaton said. Heaton is the legislature's Vice Chairman of the Radioactive and Hazardous Materials committee and a member of the Energy & Natural Resources Committee. He discussed the ABR technology and GNEP, explaining how this would solve the waste disposal problem of nuclear reactors and sway public opinion on nuclear energy.

Senator Leavell took a more cautious approach, explaining how nuclear reactors need tremendous amounts of water. "I don't think New Mexico could have a nuclear reactor, not with the current technology." But, he still agreed it would be a good idea if new technologies were developed, which used less water.



John A. Heaton

*Gay G. Kernan**Carroll H. Leavell**Donald L. Whitaker*

Senator Gay Kernan told us, “I don’t know if I should be talking about this, but we are one of the candidates for the GNEP program.” Having heard a rumor that General Atomics may propose building a nuclear power plant in eastern New Mexico, Senator Kernan confirmed such a plant may be on the drawing boards, and telling us West Texas is likely to be developed as an “alternative energy corridor.” She told us, “It would stretch from Carlsbad, New Mexico to the Odessa-Midland, Texas area.” Senator Kernan would also like New Mexico to have a nuclear plant, “I don’t have a problem with that.”

The third politician, joining Senators Domenici and Bingham, in praising the NRC approval of a draft license for LES and Urenco Ltd, was U.S. Congressman Steve Pearce. Comments, issued by his press secretary on Friday and praising the LES announcement, may foreshadow New Mexico’s next step, “Today’s announcement marks a major milestone in our efforts to cement our state’s leadership role in the development of alternative energy.” What greater leadership by a state than in introducing the new GNEP ABR technology in New Mexico? After all, the state of New Mexico remains the founding home to nuclear technology, where the world’s first atomic technology was designed at Los Alamos.

In a related development, David Watts, President of the University of Texas of the Permian Basin, recently met with Congressman Pearce about developing a helium-cooled nuclear reactor facility, which would be built underground in either Lea County, New Mexico or Andrews County, Texas. General Atomics of San Diego has funded the pre-conceptual design, which is underway and scheduled for completion in August. Waste Control Specialists has a low-level radioactive waste storage site in Andrews County. Realistically, a nuclear reactor in New Mexico is not out of the question. The legislators may get what they want. We believe Senator Domenici will ultimately set into motion the plans to bring New Mexico its first nuclear power plant. It would become his crowning achievement in helping the nuclear renaissance blossom in this country and in his state.