

What's News at Yucca Mountain

Railroad Cost Estimates for Yucca Top \$3 Billion

The cost of building a government railroad across rural Nevada to carry nuclear waste to Yucca Mountain has grown beyond \$3 billion and is climbing with groundbreaking still several years away, according to new estimates.

The Department of Energy has set \$3.155 billion as the latest price tag to run rail about 319 miles from Caliente in eastern Nevada to the Yucca site in Nye County, about 90 miles northwest of Las Vegas.

Previously, a cost estimate disclosed in December 2005 was \$2 billion.

The numbers underscore the growing cost of the proposed Nevada nuclear waste complex, and the likely challenges facing the Energy Department to secure funding from Congress for the undertaking.

"I think this is going to be a big pill to swallow on Capitol Hill," said Bob Loux, executive director of the Nevada Agency for Nuclear Projects.

"This goes to show the longer things get delayed, the more expensive it will be for the rising costs of concrete and steel," Loux said. "But also that this is a more difficult job than they thought before."

The Energy Department in March estimated that repository construction and transportation, and initial operations at the site, would cost \$27 billion. The department has not updated broader and longer range "life cycle" costs, which were at \$57.6 billion in 2001.

The government still is at least several years away from breaking ground for a railroad and for waste-handling buildings beyond the five-



mile long wide-mouth exploratory tunnel and study facilities at the site already.

Project director Ward Sproat, at a meeting in July with Nevada county officials, said railroad groundbreaking likely will be delayed beyond 2009, according to several meeting participants.

Sproat told them that he was not sure if the rail project would have the funding to start by then, officials said. DOE has routinely steered money from Yucca transportation segments to complete a license application that is considered to be a more pressing priority.

A 54-page draft national transportation document containing the new railroad cost estimates was circulated last week among state and local officials, potential repository vendors and other stakeholders.

DOE spokesman Allen Benson said the new dollar amounts for a Nevada railroad are based on "a better understanding of the cost of facilities, understanding there was a lot more work done on (the plan) and we have had a better look at the costs."

"As we come closer to construction, we will have to update the costs," Benson said. "This is where we are at this point." *(Continued on page 2)*

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Railroad Cost Estimates (continued)

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The rail cost estimates include features such as an equipment yard, maintenance facilities, a train control center and sidings to connect the line to existing track in Caliente, according to the DOE transportation document.

Bob Halstead, a transportation consultant under contract to the state of Nevada, said DOE's estimate still might be low.

"Not knowing what went into these numbers but having done detailed cost exercises and having revisited the numbers to adjust them, I would say these DOE numbers seem credible but they still might be too low. The high number could be \$3.6 billion or \$3.7 billion," Halstead said.

Halstead also said that as the rail costs continue to grow, DOE might come under pressure from trucking companies to abandon rail and ship nuclear waste to the Yucca site by truck as a more economical choice.

That scenario would open a host of new controversies, though, as the most likely truck routes would traverse the populated Las Vegas Valley, he said. *Source: Las Vegas Review Journal* ■

Georgia is One Step Closer to New Nuclear Reactors

Plant Vogtle in Burke County, two hours north of Savannah on the Savannah River, is one step closer to adding two additional nuclear reactors.

On July 12, the Georgia Public Service Commission (PSC) unanimously approved a long-term energy plan for the state - after negotiations with utility companies, environmental groups, PSC staff, the Governor's Office of Consumer Affairs and other groups.

The plan provides for approval of two new nuclear reactors at Plant Vogtle, with the provision that Georgia Power, the majority owner of Vogtle, show that it cannot provide the same amount of energy (roughly 2,400 megawatts) with another source at less expense.

Environmental groups were not pleased. The Southern Alliance for Clean Energy (SACE) refused to sign off on the plan.

The group said that the plan failed to put enough emphasis on protecting the water supply and investing in energy conservation.

"Failure of Georgia to invest aggressively in energy efficiency will translate into more high-cost power plants and transmission lines in the future," SACE stated after the vote. "This is a loss of savings consumers could otherwise enjoy from lower energy bills."

Tal Wright, a spokesperson for Georgia Power, said that the company has not definitely committed to building the reactors but a number of factors are making nuclear energy more economically attractive.

Construction Cost a Sticking Point

The earliest the nuclear reactors could be licensed, built and operational is 2015 at roughly \$2 billion a reactor, Georgia Power said last fall.

The cost of construction, however, is uncertain, Wright said.

Construction costs are going up as the cost of raw materials continues to rise. The cost of constructing the reactors has been a prickly subject between Georgia Power, environmental groups and the PSC.



The deal passed earlier this month requires Georgia Power to hold a competitive bidding process.

The company lobbied for permission to forego state-mandated bidding and further requested that it be given permission not to inform the PSC of the price of construction.

"The bid exemption was a misguided attempt by Georgia Power to control a future energy market with utility-owned nuclear reactors," said Rita Kilpatrick with SACE.

Her organization told the PSC that Georgia Power was intentionally under-estimating its construction costs and that its estimates were out of

Georgia is One Step Closer (Continued)

range with other industry and government estimates.

The cost of the existing reactors at Plant Vogtle was a whopping \$9 million, almost \$8 million over the original estimate.

Wright, however, said that things have changed since what he called the "Three Mile Island era," in reference to the accident at a nuclear power plant at Pennsylvania's Three Mile Island in 1979.

Construction of reactors these days is not an improvised process between the industry and regulators, as it was in the 1970s and '80s, Wright said.

"Plans for (nuclear power reactors) have become standardized," he said. "The industry and regulators got together to achieve this."

Natural gas, another possibility, is currently very expensive, Wright pointed out. That leaves coal.

"When the (commission) says 'other sources, I think they are basically talking about coal," he said.

Wright said that while coal plants are cheaper to build than nuclear, they are also more expensive to run and require the installation of EPA-required scrubbing technology that can sometimes cost more than the actual coal plant.

"The other unknown in this is if there will be a carbon tax," Wright said.

A carbon tax is an idea that has been tossed around in order to reduce harmful greenhouse gas emission, which are believed to play a role in global warming.

Federal Cheerleaders

The Bush Administration and the energy industry have touted nuclear energy has a way to reduce global warming.

A study conducted by the Massachusetts Institute of Technology, however, determined that roughly 1,500 new reactors would have to be built worldwide by mid-century for nuclear power to have even a modest impact on greenhouse gasses.

The Energy Policy Act of 2005 provides incentives for energy companies to build new reactors.

There are tax incentives and a new licensing system, and the government is offering "risk insurance" for the first six reactors built to protect against licensing delays.



If Georgia Power decides to go ahead with its plans, the construction of the reactors is still contingent upon obtaining federal licenses. The PSC will not make a final decision on its approval of the reactors until 2008. *Source: Savannahbusiness.com*

Mineral Students Complete Survey

Mineral County High School Students recently completed a survey of local residents to determine their familiarity with the Yucca Mountain Project and the federal government's efforts to store spent nuclear fuel in Nevada.

Approximately 225 face-to-face surveys were conducted focusing on questions and issues that have been the subject of national survey efforts related to Yucca Mountain. Using these questions allowed the study to compare local responses with those in the national survey sample.

Results found that local respondents favored (64.7%) nuclear power over other sources of energy such as coal or oil as one of the ways to provide electricity while a 2005 national survey showed respondents slightly higher at approximately 70%.

Similarly, Mineral County respondents appear to support the construction of new nuclear power plants. In 2006, just over 66 percent of Mineral County respondents either strongly agreed or somewhat agreed that more nuclear power plants should be built in the future. In 2007 about 55 percent of survey respondents agreed that more nuclear power plants should be built. As recent as 2003, approximately 54 percent of national survey respondents either strongly favored or somewhat favored the development of new nuclear power plants.

A vast majority of Mineral County community survey respondents said it was extremely important or very important to have a clear plan of action for handling the high-level radioactive waste from America's 103 electricity-generating nuclear power plants *(Continued on page 6).*

Sting Reveals Security Gap at Nuclear Agency

Undercover congressional investigators posing as West Virginia businessmen obtained a license with almost no scrutiny from the Nuclear Regulatory Commission that enabled them to buy enough radioactive material from U.S. suppliers to build a "dirty bomb," a new government report says.

The investigators obtained the license within 28 days from officials at the NRC, the federal agency that in addition to regulating nuclear power plants oversees radioactive materials used in health care and industry, the report by the Government Accountability Office says. NRC officials approved the request with a minimal background check that included no face-to-face interview or visit to the purported company to ensure it existed and complied with safety rules, the report says.

Using a post-office box at Mail Boxes Etc., a telephone and a fax machine, the undercover investigators from the GAO obtained the license "without ever leaving their desks," the report says.

After counterfeiting copies of the license, the GAO undercover agents ordered portable moisture density gauges, which contain radioactive americium-241 and cesium-137 and are commonly used at construction sites to analyze the properties of soil, water and pavement. The investigators ordered 45 gauges -- enough to build a bomb with enough radioactive material to qualify as a level-3 threat on the International Atomic Energy Agency's scale of 1 to 5, with 1 being the most hazardous.

The GAO investigators never took possession of the radioactive material, in part because they lacked the means to handle it safely. But the report notes that, armed with an

arsenal of phony licenses, they could have secured contracts to buy much more than they did -- enabling them to make an even more lethal bomb.

"We altered the license so that it appeared our bogus company could purchase an unrestricted quantity" of radioactive material, the report says. A dirty bomb is designed to use conventional explosives to cause immediate injury to people nearby but also to cause a long-lasting threat by contaminating a wider area with radioactive material.

"My sole concern, our sole concern, has been the safety of the American people," he said.

After the GAO presented the NRC with the results of its undercover operation, NRC officials on June 1 ordered an immediate, temporary halt in new licenses to handle radiation risks of 3 or lower. The agency lifted the ban two weeks later after modifying its procedures to require either a face-to-face



meeting or site visit, McGaffigan said. The NRC already requires site visits before issuing licenses to handle material with risk levels of 1 and 2.

McGaffigan, who is to testify on behalf of the NRC at the hearing, acknowledged that one serious hurdle remains.

"We have to fix the problem of people taking our licenses and counterfeiting them," he said.

In a report in 2006 and again this year, the NRC's inspector general criticized NRC officials for failing to detect and understand security flaws in its licensing process.

Coleman and other critics say the NRC essentially has ignored warnings for years and has done too little to remedy problems that would make it easier for someone to make a dirty bomb. Coleman called the NRC's efforts since June 1 "baby steps" that

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The GAO undertook the sting operation at the request of Sen. Norm Coleman (R-Minn.), the top minority member of the Senate permanent subcommittee on investigations, which since 2003 has been examining security gaps at the NRC and other federal agencies that could leave the country vulnerable to biological or nuclear attack. The report is to be the subject of hearings before the subcommittee.

The GAO study is the latest of several government reports following the Sept. 11, 2001, terrorist attacks to warn of serious security gaps in NRC licensing procedures.

A year ago, undercover GAO officials successfully bought enough radioactive material abroad to make two dirty bombs and smuggled them into the United States at two points, one on the Canadian border and one on the border with Mexico.

"It was as easy to get his material as a DVD at Netflix," Coleman said of the most recent investigation. "If al-Qaeda had set up a phony corporation in the U.S., they could have gathered enough material to make a dirty bomb. The problem is that the NRC is still operating on a pre-9/11 mentality. It boggles my mind that the NRC doesn't readily understand the threat we face."

NRC commissioner Edward McGaffigan Jr. said in an interview that the agency, while concerned about any security weakness, has had to allocate finite resources to what it thinks are the biggest potential threats to public safety. He said terrorists have looked for relatively simple ways to cause massive death and damage.

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Sting (Continued)

are insufficient and particularly outrageous because the agency has taken so long to act despite having been warned of serious flaws for more than four years.

When GAO investigators briefed Coleman on the results of the most recent operation, they said they focused the sting on West Virginia in part to show how close to the nation's capital a terrorist could build a bomb. Such proximity would reduce the chance of detection during transport to a target, the GAO briefers said, according to Senate staff members who heard the briefing.

In addition, by operating from West Virginia, the GAO undercover investigators were required to deal directly with the NRC. That's because West Virginia is one of more than a dozen states, including Virginia and the District of Columbia, that don't have their own system for issuing licenses for the handling of radioactive material and monitoring those who apply for them.

During the sting operation, an NRC official speaking to one of the phony businessmen on the phone said the agency needed to speak to the man's boss. The GAO agent put him on hold for a minute or two, then picked up the call without disguising his voice but pretending to be his boss, according to people familiar with the GAO investigation. The NRC reviewer accepted the calls at face value.

By contrast, the GAO investigators failed to obtain a license in Maryland, which is one of 34 states that under agreement with the NRC conduct their own licensing. Maryland officials told the disguised GAO employees that state inspectors would have to visit their company and perform other checks, which would take at least seven months. At that point, the phony businessmen withdrew their application, the report says. *Source: Washingtonpost.com* ■

Tribe allowed to give input on Yucca Mountain project

The Interior Department has certified the Timbisha Shoshones as the first American Indian tribe affected by the government's effort to put a nuclear waste repository in Yucca Mountain.



Timbisha Tribal Lands in Death Valley

The four-page, June 29 approval letter from Assistant Secretary for Indian Affairs Carl J. Artman allows the tribe to participate in planning decisions and receive money to conduct studies and oversight of the Yucca Mountain site, 90 miles northwest of Las Vegas.

Artman wrote that the Timbisha Shoshone tribe "may be substantially and adversely affected by the proposed geologic repository at Yucca Mountain."

Allen Benson, Department of Energy spokesman for the Office of Repository Development in Las Vegas, said the tribe is one of 17 the agency has consulted with on Yucca Mountain matters.

"We've been working with the Timbisha Shoshone for over 10 years and look forward to continuing our relationship with the Timbisha Shoshone. ... Whether they support the project or not, it doesn't matter, we're going to work with them."

The tribe's chairman, Joe Kennedy, said the affected status decision is "a big step."

"It's been a long time coming. We're very pleased," he said, noting that the tribe first applied for affected status in 1998.

On a DOE-sponsored tour of the Yucca Mountain site in 2003, Kenne-

dy described the volcanic-rock ridge as a giant snake slithering westward that "is a very scared mountain to Shoshones" and shouldn't be used as a dumping ground for highly radioactive waste.

After confirming that the tribe had been granted affected status, he said, "I think we need to keep the government honest. ... I think some of us are saying we need to keep this thing on the up and up."

Referring to the state of Nevada and some of the affected counties that receive government funds to conduct studies and monitor the Yucca Mountain licensing process, Kennedy said, "I think we're all working for the same goal to protect the environment, protect the water, protect the land and protect the plants and animals and protect life basically so there's a future."

He said the Timbisha Shoshone tribe has trust lands in Lida Junction and Scotty's Junction in Nevada, and in Death Valley Junction, Furnace Creek and Centennial near Lone Pine in California that stand to be impacted by radioactive materials that could seep into the groundwater if they are disposed of in a maze of tunnels inside Yucca Mountain.

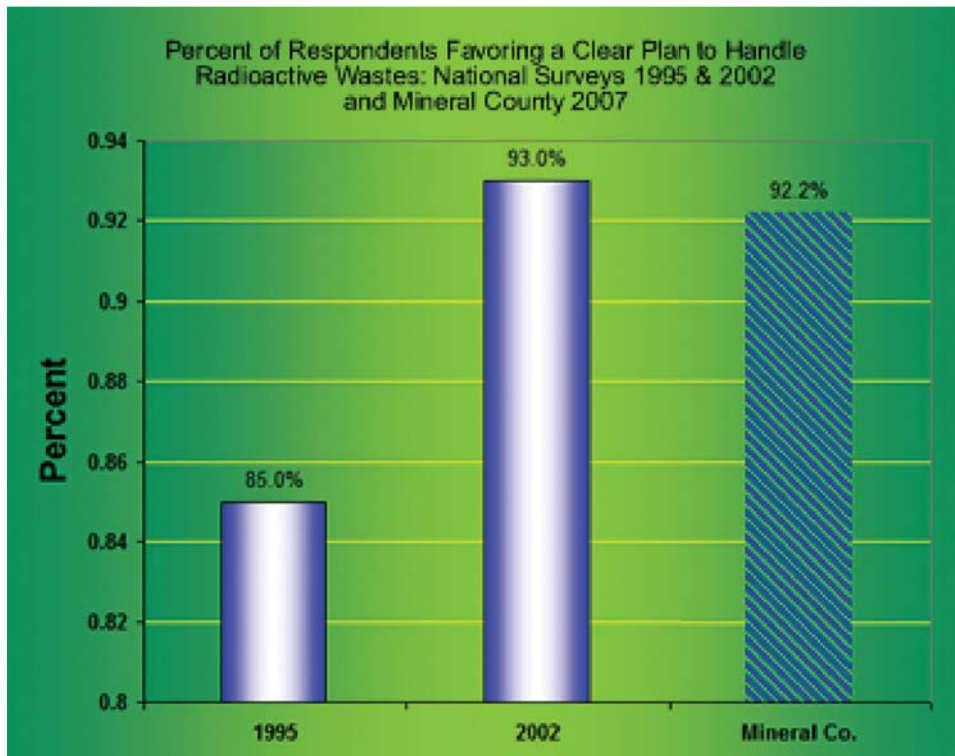
The tribe consists of about 330 Shoshones, he said. *Source: Las Vegas Review Journal* ■

Mineral Students Complete Survey (Continued)

The number of Mineral County survey respondents who felt that having a clear plan for handling high-level nuclear waste was important, is similar to national survey responses (See Figure below). Nearly 90 percent of survey respondents also indicated that Nevada should receive a benefits package or compensation if the Yucca Mountain project is built.

evaluate a potential rail corridor through Mineral County.

After reading a statement regarding the safety record of nuclear waste shipments, nearly 70 percent of respondents were either very confident or somewhat confident that waste could be transported safely.



Mineral County survey respondents became somewhat less confident that spent nuclear fuel and high-level waste can be shipped safely. In 2007, approximately 60.3 percent of Mineral County respondents were either very confident or somewhat confident that nuclear waste from America's nuclear power plants could be safely transported to Yucca Mountain. The percentage of Mineral County survey respondents having this view decreased from last year. In 2006, about 70 percent of the Mineral County survey respondents indicated that they were very confident or somewhat confident in the safety of nuclear waste shipments. The change in attitude toward waste shipment may be attributed to DOE's decision to

Even more interesting is that the only a small majority of survey respondents (56.6%) believed that there is more risk in shipping high-level radioactive wastes as compared to gasoline or other industrial chemicals. Although a full 83.3 percent of survey respondents were aware of the Yucca Mountain project, only 65.9 percent were aware of plans to ship wastes through Mineral County. This finding is somewhat concerning given DOE's recent efforts to study the Mina Rail corridor.

If you would like a copy of the 2007 Survey, please contact Linda Mathias, Director of Nuclear Projects at (775) 945-2484 or you can download a copy from the Mineral Nuclear Website at <http://mc-nucprojects.com/PDF/MCSurvey07.pdf> ■

This newsletter is a publication of the Mineral County Repository Planning and Oversight Program. Mineral County is one of ten affected units of local government involved in the proposed Yucca Mountain Repository.

Funding provided to Mineral County is paid by users of electricity generated by nuclear power plants. Under a general contract with nuclear generating utilities, the federal government collects a fee of one mill (one-tenth of a cent) per kilowatt-hour from utility companies for nuclear generated electricity. The money goes into the Nuclear Waste fund which is used to fund all program related activities.

These articles may not necessarily reflect the positions or opinions of the Mineral County Board of Commissioners.

For more information on Mineral County's program contact Linda Mathias, Director of Nuclear Projects at (775) 945-2484.

Additional information on the DOE repository program can be obtained from the DOE, Yucca Mountain, Site Characterization Project Office at (702) 794-1444 or contact them at www.ymp.gov, or the Nevada Agency for Nuclear Project, Nuclear Waste Project Office, Capital Complex, Carson City, Nevada 89570, (775) 687-3744 or visit their web site at state.nv.us/nucwaste.

Additional copies of this newsletter are available at the Mineral County Nuclear Projects Office located in the County Courthouse or you can obtain copies from the County Library. Copies can also be downloaded from the website at <http://www.mc-nucprojects.com>.

Questions and/or comments are welcome - Editors: Rex Massey, Linda Mathias, Contributing Editor, format, graphics, Loreen Pitchford