

Additional Review By M. D. Campbell and Associates, L.P.
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Black = Original Article Content

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Article in Question:

[This is an example of a reasonably well-balanced, well-written article]

Powering Up Nuclear

Uranium industry still has its supporters, opponents

The Independent, Gallup, New Mexico
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By Kevin Killough
Staff Writer

GALLUP — At the beginning of 1979, America's nuclear energy industry was on a path to overtaking carbon-based energy. The technology was growing rapidly and nuclear plants were becoming more efficient. New Mexico was enjoying thousands of jobs created by the uranium mining industry around Gallup. And it seemed the industry had a bright future.

In March of that year, the nuclear and uranium mining industry got a one-two punch that changed the course of energy policy in America ever since. The blockbuster movie "The China Syndrome" came out, which showed Jack Lemmon and Jane Fonda faced with global disaster as a nuclear plant faced a meltdown. Then, as if right on cue, the reactor at Three Mile Island did just that, resulting in partial yet well-publicized evacuations of the area.

[There was never a meltdown confirmed in the Three-Mile Island incident. Only a release of a small volume of radioactive gas. Evacuation of the public surrounding the plant was an understandable safety response]

The entire industry tanked as public hysteria turned against it. Plans for new plants were canceled and the demand for uranium evaporated. The uranium mines in New Mexico closed, and not a single nuclear power plant has been built since.

[1. If you remember the late 1970s, this hysteria was created by massive media coverage creating fear throughout the U.S., in the populace and in a weak government. Looking back, this over-reaction was a major mistake in dealing with a relatively new technology, with a lack of management communication of actual conditions, and with a failure in the technology that was monitoring conditions within the plant.

2. As we now know, no one was injured during this incident. The management and technical issues could have been overcome and nuclear power would now be providing almost 50% of the electrical

generation coal now provides.

3. Hundreds of coal-mine workers who died in mine accidents over the last 25 years would be alive today.

4. More than 50 billion tons of CO₂, plus SO₂ and NO₃ and mercury, would not have been released to the atmosphere if nuclear power had been allowed to continue to expand over the past 30 years.]

Not a single person died in the incident, and according to the U.S. Nuclear Regulation Commission, the people in the surrounding area received a dose of radiation about one-sixth that of a typical X-ray. It's taken the country nearly 30 years to get over their fears of nuclear energy, even though Three Mile Island demonstrated that even a rare event like a meltdown could be effectively contained with the proper systems in place to handle it. Like most fears of nuclear energy, supporters insist the threat of a meltdown is no reason to abandon the benefits nuclear energy could bring.

[The reporter doesn't know that a meltdown never happened but repeats false information distributed by other news media. We have discussed the fear that was encouraged by the media in an earlier report ([here](#)).]

Today, more than 600 coal-fired plants dump nearly 2 billion tons of CO₂ in the atmosphere every year. This is in addition to 64 percent of sulfur dioxide emissions, 26 percent of nitrous oxide emissions, and 33 percent of mercury emissions. Meanwhile 103 nuclear power plants supply America with 20 percent of its electricity today without contributing any greenhouse gasses to the air.

In New Mexico, nearly 89 percent of electricity comes from coal. In the United States, nuclear power reduces power plant CO₂ emissions by 35 percent, which is the equivalent of 100 million automobiles. There would be significant improvements to air quality if 20 percent of New Mexico's energy came from nuclear.

This year, NRG Energy Inc. applied for approval of the first nuclear power plant in nearly 30 years. Three Mile Island was the only major nuclear accident in the United States.

In addition, according to CASEnergy Coalition, a grassroots umbrella for nuclear energy proponents, a single nuclear power plant in New Mexico would provide 1,400 to 1,800 construction jobs at the plant site, and more than 1,000 long-term jobs for the community. The plant would also pump \$500 million a year into the economy.

Can it Work?

Despite all this, nuclear energy has its detractors. The concerns for safety, waste disposal, and the environmental impact of uranium mining continue to stir opponents. Among those is Betsy Windisch of Gallup Solar. The organization is pushing for a solar plant near Gallup with the goal of reducing the use of coal-fired plants for electricity.

"When I was in college," says Windisch, "we were talking about solar. We tout ourselves as such a high-tech society. But look at Europe and what they're doing with solar. This country is so far

behind the times.”

[In fact, a substantial research effort is underway on solar, wind, and geothermal energy. To date, findings indicate that neither solar or wind are scalable to meet the large requirements. Application of solar and wind plants in remote, small communities is feasible and are under construction in various locations around the U.S.]

Solar can cost many times more than nuclear and coal-fired to produce, making it not economically feasible to produce the baseload required to satisfy all of the state’s energy needs. But it’s not just solar. Compared to America’s 20 percent, France gets 78 percent of its electricity from nuclear. Belgium gets nearly 56 percent, Sweden about 50 percent, and Switzerland nearly 40 percent.

“So what if it costs more now?” Windisch asks. She says that the technology is improving and will be much more efficient in the future. Though, arguably, because of waste created by nuclear operations, it is not cleaner than solar and wind sources. And for many, that radioactive stuff that comes out of a reactor is a major concern. “Why build something that has such a dirty end product?” Windisch asks. “Here in New Mexico, we don’t have enough water for our people,” Windisch points out. Nuclear energy does take a lot of this scarce resource.

[1. Technologies for all energy sources are constantly improving, but the question is how much longer before solar and wind power meet all of their potential. While many are rushing into promoting solar and wind, no one is apparently looking at their negative sides. Both require a much larger land footprint for operating than nuclear power. Windmills can be harmful to flying wildlife, while they have a smaller impact on the land surface.

2. Some states, such as Massachusetts, have banned vast areas for wind production due to “visual pollution”. Solar panels shade the ground, making it useless for agriculture. As stated below, one solar farm will remove 35,000 acres of land from any kind of agricultural use, or even just wild growth, which actually could be used for atmospheric CO₂ removal.

3. We have discussed our views on the current debate on global warming and energy, (see [here](#).)]

“The range of water usage, which is measured in megawatt hour, ranges from 400 per megawatt hour on the low end to 720 gallons per megawatt hour,” John Keely, spokesman for the Nuclear Energy Institute, said. Using a pond cooling water system for a nuclear plant, which has the least amount of water drain, the entire state of New Mexico would use about 13 billion gallons of water a year to supply all the state’s energy needs. Chances are this is not much different from coal-fired, natural gas, or solar thermal plants. They all heat water to create steam, which turns turbines.

Photovoltaic solar and wind energy are the only sources currently available that do not use significant amounts of water. Though, the plants do take up a significant amount of space, which means they do have their environmental impact. According to figures provided by CASEnergy, a 1,000-megawatt solar farm consumes 35,000 acres of land. A comparable wind farm takes up more than 4 times that amount. A comparable nuclear plant does the same thing in less than 1,000 acres without hitting people with unaffordable electric bills.

Clean Mines?

“In New Mexico, we’re especially against nuclear energy because we’re living near Churchrock and the reservations,” Windisch explains. “The companies have not cleaned up the water. Why build something that costs millions of dollars when the mining costs need to be considered?”

Nuclear energy, which depends on uranium mines, lost a lot of friends when mines poisoned ground water and failed to protect miners from radiation. Cleanup operations continue, and those people who have waited so long to have the damage repaired have legitimate reasons to complain.

But just as with nuclear power plants, increases in miner safety, environmental protections, and technological innovation make mining operations safer and cleaner than they were 30 years ago when the uranium mining industry was still booming in New Mexico.

“Mining operations have been entirely revamped,” Rick Van Horn, executive vice president and COO of Uranium Resources Inc., said.

He pointed out that uranium mining used to be as primitive as any other type of mining. It was deadly, dangerous work. There was no Environmental Protection Agency and no Mine Safety and Health Administration. There were no regulations whatsoever. Today, mining is a highly regulated industry that answers to a host of government entities.

Van Horn recalls the time when uranium mine workers took their clothes home, washed them with their whole family’s clothes, and effectively contaminated entire families. “You could even smoke inside the mines. Today, you can’t even bring smoking products into the mine,” he said.

The lack of these and other safety rules, he says, contributed to the cancer and other health problems mine workers continue to face today.

“It’s a learning process as with any industry,” Van Horn said. “There’s no doubt people got cancer from radiation exposure. We understand the legacy of uranium mining.” Van Horn insists that the same innovations and regulations that protect miners can protect aquifers. Likewise, he says, mining companies can only perform the process in areas of the aquifer that can’t be used for potable water. “We can’t inject into a drinking source,” he said. The application process is lengthy today, says Van Horn, with a wide range of requirements that must be met before mining can begin. And strict monitoring regulations continue throughout the process.

[The reporter has this issue somewhat confused. In one sense, it is fortunate that the uranium has been identified in the aquifer by the uranium industry before the real-estate developers build strip malls and residences on the land above the uranium mineralization occurring naturally in the aquifer. The area of uranium mineralization, and safe distance surrounding the known mineralization, would be prohibited by the state for use as a source of drinking water.]

Not Convinced

Besides the Navajo Nation government, there are others that still aren’t convinced. In July, a group calling itself the South Texas Opposes Pollution came from Kingsville to the area when URI began seeking leases for mining operations in Churchrock and Crownpoint. While many in the area of Kingsville have no complaints against the company, the group claims the company left their

groundwater poisoned with uranium. Van Horn dismisses their accusations as baseless.

“It is untrue. We tested (the water) before 1986. It was high in uranium then. It’s high in uranium now,” he explains. “It wasn’t the mining. If we had done this, we would be shut down.”

[If the ground water in the area of Kingsville had been contaminated, the Texas Commission on Environmental Quality (TCEQ) would have sanctioned URI with fees and other penalties and requirements for clean-up. Since the TCEQ has not raised any such concerns, it is to be assumed that the STOP group has made false claims against URI and that any elevated constituents present in the subject were present before mining began. Another instance of natural contamination, confirmed by sampling performed by URI.]

Voices on both sides are quite adamant about their claims. But the truth is uranium mining will have some impact.

[The reporter apparently makes this claim (so he won’t offend any reader) without understanding the distribution of the naturally occurring constituents, such as: uranium, and other metals. The uranium was already present in the aquifer before humans walked the earth. In-situ mining removes from the aquifer a substantial volume of bacterial-waste products created by the initial formation of the uranium minerals.]

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