PM: Melt-Down or Revival of Critical Thinking?

By Polly Mann

For more than 30 years, nuclear power appeared to be on the wane in the U.S. Although some existing plants did increase their capacities through refurbishing, most new construction that occurred after the 1979 partial meltdown at Three Mile Island in Pennsylvania had been approved prior to the incident. The last new reactor to be built began service in 1996. The nuclear industry had been constrained after Three Mile Island due to the fact that the Nuclear Regulatory Commission (NRC) adopted more stringent safety standards causing construction costs to skyrocket, and public objection to nuclear energy succeeded in preventing the construction of many plants that had been planned.



Cooling tower collapse, Vermont Yankee nuclear plant. Photo: Safe & Green Campaign

But in February of 2012, the Nuclear Regulatory Commission voted to license Georgia Power, a subsidiary of Atlanta-based Southern Co., to both build and operate two new reactors at its existing power plant near Waynesboro, ushering in what the industry had hoped would be a "Nuclear Revival." NRC Chair Gregory Jaczko cast an extraordinary dissenting vote among the nuclear commissioners, citing the 2011 Fukishima nuclear disaster in Japan that had spurred the NRC to review whether existing and new U.S. reactors could withstand natural disasters like earthquakes and floods.

And now an alarming new report could serve as an additional deterrent. It reveals that U.S. sailors in the vicinity of the meltdown of the Fukushima atomic power plant in 2011 were tragically exposed to high levels of radiation as the reactors were melting. As part of an effort to aid the Japanese government, some of the sailors

were sent to take off on helicopters from the USS Reagan and fly over the wrecked plant and surrounding countryside to observe and report on damage. Even the sailors who serviced the helicopters and others remaining on the ship experienced health problems consistent with major radiation exposure. Kyle Cleveland, founding director of the Institute of Contemporary Studies at Temple University's Japan campus obtained transcribed conversations through the Freedom of Information Act revealing naval officials acknowledging that even while the ship moved 100 miles from Fukushima, radiation readings were "about 30 times what you would detect just on a normal air sample out to sea" (The Asia Pacific Journal: Japan in Focus, February 17, 2014). Many of the navy personnel are suing Tokyo Electric Power (TEPCO) for \$1 billion.

Leaks at the Fukushima site continue to worsen. Despite its denials, TEPCO recently admitted it had underestimated certain radiation releases by a factor of 500 percent. A new report indicates that particles of radioactive cesium-134 from Fukushima have been detected in the ocean off the west coast of North America.

According to the U.S. Nuclear Regulatory Agency, there are now five new nuclear plants under construction in the United States and the NRC is reviewing license applications for 12 new plants—in the South and along the east coast. But plans aren't going as smoothly as anticipated. By mid-February of this year, the Watts Bar unit in Tennessee was behind schedule and costs will "significantly exceed" a previous building cost estimate of \$2.5 billion.



The answer blown in the wind: turbines at Buffalo Ridge, Minnesota Photo: University of St. Thomas

Even without taking into account the Fukushima disaster (though any amount of critical thinking would), new nuclear plants are "more questionable because there are economic factors right now which favor gas-fueled power plants and the fact that the economy is only growing slowly means that nationally the need for new generation is lower than people were expecting in 2007," said Michael Golay, a professor at the Massachusetts Institute of Technology. (2007 was the year that the nuclear industry began to apply for new construction and operating licenses again) A 1,000-megawatt natural gas plant takes a few years to plan and build and would cost up to \$1 billion for the most efficient, combined-cycle model. A similar-sized nuclear reactor, however, could take five to 10 years to develop and build and cost more than \$5 billion, according to a 2012 Reuters report.

However, according to an MSNBC report two years later on February 19, the Obama administration declared itself committed to nuclear energy, along with natural gas, solar, and wind, as part of America's mix in "low carbon" energy production. Billions in federal loans are being granted to get the nuclear power industry going again. Without federal funding it would not be possible as banks won't take the risk.

Critical thinking appears to be having a serious meltdown.

But, over the years, people have proven that they can resist nuclear power. Just a few examples: In the mid-'90s, the whole state of Minnesota appeared to be engaged in an anti-cask movement directed at the Prairie Island nuclear power plant on the Mississippi River, drawing attention to the fact that there is no permanent solution for dealing with nuclear waste. Grassroots activism was a key factor in the anticipated 2014 shutdown of the Vermont Yankee nuclear plant that had experienced the collapse of its cooling tower and groundwater leaks.

With its serious fracking issues, natural gas is obviously not the solution for supplying our energy needs. So as the nuclear industry attempts to revive and the anti-fracking movement grows strong, this is the time to seize the momentum and demand that the U.S. subsidize renewable energy in a massive way. It could begin a revival in critical thinking.

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