



Nuclear Fallout

Jonathan A. Lesser

The horrific events of the magnitude 9.0 earthquake that struck Japan on March 16—the strongest to hit the country in three centuries—will not soon be forgotten. Thousands were buried under rubble and swept away by a massive tidal wave.

ECONOMIC CONSEQUENCES ON INDUSTRY ALREADY UPON US

Nevertheless, while Japan eventually will rebuild, the reverberations for the nuclear power industry in the United States appear to have just begun. Thus, history repeats itself again. Every nuclear plant accident—Three Mile Island, Chernobyl, and now Fukushima Dai-ichi—leads to calls for shutting down all nuclear plants. Every nuclear plant accident leads to indiscriminate radioactive hysteria, in which all nuclear plants are deemed ready-to-melt-down time bombs.

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Just as the US nuclear industry was beginning to show signs of reemergence, despite the Department of Energy's ill-administered loan guarantee program (guaranteed . . . as long as the guarantee is not needed), the fallout from the Fukushima accident has begun. NRG, for example, which was planning

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to build two nuclear plants at its South Texas Project nuclear station in Matagorda County, 90 miles southwest of Houston, in partnership with Toshiba and Tokyo Electric (the owner of the Fukushima Dai-ichi plant), announced it may delay or even cancel the plants because of increased regulatory uncertainty and greater difficulty of obtaining financing.¹ In Germany, Chancellor Angela Merkel ordered the immediate shutdown of seven nuclear power plants built before 1980.

PREDICTABLE ENVIRONMENTALIST REACTION

Of course, some environmental groups are both crowing “we-told-you-sos” and offering their traditional wringing of hands and gnashing of teeth. For example, Greenpeace has already indicted the Nuclear Regulatory Commission (NRC), saying, “Industry watchdogs see the fateful decision regulators made almost 40 years ago—to choose political and economic pragmatism over tougher safety standards—as endemic in the culture of the NRC as it deals with the prevention of low-probability, high-consequence accidents.”² Greenpeace then asks, “Will the Nuclear Regulatory Commission allow these dangerous reactors to continue threatening communities in the United States?”³

Not to be outdone, the Sierra Club states, “It took a horrific disaster in Japan to remind the world that none of the fundamental problems with nuclear power have ever been addressed,” and advises its members, “Tell your senators that we need to invest in clean, renewable energy, not dirty, deadly, unsafe, and costly nuclear energy.”⁴

Yet both these organizations remain strangely silent about the real environmental disaster: a tsu-

nami that has deposited sewage, fuels, and chemicals on thousands of acres of Japanese land, which will undoubtedly affect the country's agriculture and water resources for years.

NUCLEAR POWER HAS PROVED SAFER THAN OTHER SOURCES

According to data published by the US Energy Information Administration in the decade ending in 2009, US nuclear plants alone avoided emissions of 6.8 billion tons of carbon dioxide, 31 million tons of sulfur dioxide, and 11 million tons of nitrogen oxides.

In 2006, China recorded the deaths of 4,746 coal miners. How many other deaths went unrecorded is not known. US coal miners fared much better, with only 47 deaths in 2006.

And what about nuclear power? Fifty-nine firemen and workers lost their lives at Chernobyl when that reactor's open-air graphite core (no containment vessel at all) burned for more than one week. The radiation release, and the failure by the Soviet Union to evacuate anyone living near the plant as a precaution, has led to some 1,800 cases of thyroid cancer among children but fewer than a dozen deaths. The death toll from Three Mile Island: zero. The death toll from Fukushima Dai-ichi: one worker, killed in an explosion caused by a buildup of hydrogen. The potential future incidence of cancer, given the quick evacuations of people living near the plant, is likely to be extremely low, and dwarfed by the number of people who will contract cancer by smoking.

In 2010, nuclear power provided over 800 terawatt-hours (TWh) of electricity, 20 percent of US electric supplies.⁵ Coal, deemed evil in its own right because of greenhouse gases, acid rain, air toxics, water pollution, and molesting small children, provided over 1,800 TWh, 45 percent of total supplies.

And what about renewable generation? Excluding conventional hydropower, which is provided primarily by large, federally owned hydroelectric plants that could not possibly be built today because of their environmental impacts, all renewable generation combined—wind, solar, biomass, geothermal, and others—provided just 168 TWh, less than 5 percent of total US generation.⁶ To think that renewable generation can replace 20 percent of the US electric supply, to say nothing of 65 percent if coal and nuclear are eliminated, is folly.

If these organizations that oppose nuclear power and, in the case of the Sierra Club, just about everything else, are truly concerned about health and safety, would it not be reasonable to compare the loss of life from nuclear power with the loss from the tsunami? Would it not be reasonable to tally up the thousands of coal miners killed every year in underground explosions and cave-ins? Would it not be reasonable to consider that nuclear power does not emit any greenhouse gases, criteria pollutants, or air toxics?

Although these two environmental groups continue to believe that the United States, if not the world, can meet all of its electricity needs from wind and solar power, other environmental groups have recognized that nuclear power is the only viable long-term power solution, barring some transformational break, such as space-based solar panels that beam electricity to earth.

None of this is to suggest US nuclear plant safety should be taken lightly. And it is not, despite Greenpeace's insinuation that the NRC is just a nuclear industry pawn. Moreover, it would be prudent to evaluate backup power facilities at Diablo Canyon and San Onofre, two nuclear plants on the earthquake-prone California coast that could be affected by a tsunami. But, once again, hysteria is crowding out common sense. Our energy policy will be worse for it. 

NOTES

1. Smith, R. (2011, March 23). NRG casts doubt on reactor plans. *Wall Street Journal*. Retrieved from <http://online.wsj.com/article/SB10001424052748703410604576216990115610336.html>.
2. Smyth, J. (2011, March 17). Dangerous old nuclear reactors in the United States and the Nuclear Regulatory Commission. Retrieved from <http://www.greenpeace.org/usa/en/news-and-blogs/campaign-blog/dangerous-old-nuclear-reactors-in-the-united-/blog/33808>.
3. Ibid.
4. <http://www.sierraclub.org/nuclear/default.aspx>.
5. US Energy Information Administration (EIA). (2011, March 11). *Electric Power Monthly*. Retrieved from http://www.eia.doe.gov/cneaf/electricity/epm/table1_1.html.
6. The Sierra Club has also fought bitterly against solar photovoltaic development in Southern California. On December 30, 2010, for example, it filed a challenge with the California Supreme Court challenging the California Energy Commission's (CEC's) approval of the 850-MW Calico Solar power project because the CEC did not adequately consider the impacts the project on the desert tortoise, the Mojave fringe-toed lizard, and the white-margined beardtongue wildflower. As the Sierra Club stated, "The need for increased renewable energy generation does not grant solar energy companies a free pass to ravage pristine desert habitat under the false claim of 'clean energy.'" The Calico project site is about 8,500 acres, or roughly 10 acres for each MW. <http://www.mojavedesertblog.com/2011/01/sierra-club-lawsuit-targets-calico.html>.