NUCLEAR CRISIS
JAPAN & THE FUTURE OF ENERGY POLICY

2. NUCLEAR CRISIS: Former NRC member says renaissance is dead, for now *(Greenwire, 03/18/2011)*

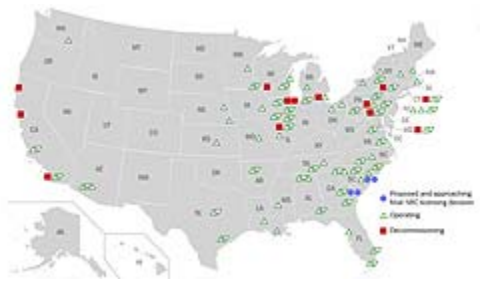
Hannah Northey, E&E reporter

The birth of the "nuclear renaissance" and proposed construction of up to 100 new nuclear reactors in the United States will be crippled by the crisis in Japan as regulators struggle to incorporate "lessons learned" into the country's existing nuclear fleet, a former member of the Nuclear Regulatory Commission said today.

"I think the effort to expand, to build a fleet of new plants ... [is] certainly dead for now," Peter Bradford said today during a briefing with reporters in Washington, D.C.

Bradford, a professor at the Vermont Law School, cast doubt over the federal government's assertions that the NRC can incorporate "lessons learned" from the crisis unraveling in Japan into the U.S. nuclear industry without slowing or stopping the permitting and relicensing of new nuclear reactors. Japan was struck by an 8.9 magnitude earthquake on March 11, followed by a deadly tsunami that crippled the Fukushima Daiichi nuclear complex on the country's eastern shore.

Nuclear Nation



Current, proposed and decommissioned nuclear plants in the U.S. **Click here** to view the map and special report.

Energy Secretary Steven Chu and NRC Chairman Gregory Jaczko have stood firm behind assertions during congressional hearings this week that although a review will be conducted of the U.S. nuclear fleet, the ongoing regulatory process for existing and new nuclear plants will go unscathed.

But Bradford, who served the NRC during the 1970s when the agency dealt with the partial meltdown at the Three Mile Island nuclear plant in Pennsylvania, said the process of reviewing and potentially updating the safety of plants does not go hand in hand with the current pace of NRC oversight.

"Continuing a nuclear expansion in parallel with learning the lessons is just a terribly unlikely scenario," Bradford said. "The NRC can't divert resources that it's going to have to do for a 'lessons learned' process and still continue trying to have design approvals and construction and operating licenses on the original schedule."

Although Chu is right to tread carefully before final conclusions have been reached surrounding the crisis in Japan, Bradford said NRC will be strapped for funding if it tries to continue licensing plants while simultaneously undertaking a safety review of the entire fleet of 104 reactors in the United States. NRC, he added, will not even understand what happened in Japan for another nine months or so.

Bradford pointed out that NRC did not approve any additional nuclear plant licenses for up to two years after the Three Mile Island event. Instead, the agency found it necessary to shut down plants with a Babcock & Wilcox design for about four months to analyze their vulnerability, he said.

Changes were made and they came back online, and the NRC took the better part of a year to establish what had happened. Such uncertainty will also plague the understanding of events at Japan's Fukushima Daiichi plant, he said.

Robert Alvarez, a senior scholar at the Institute for Policy Studies, said the United States is currently dealing with "fragmentary" information coming out of Japan, and that the Tokyo Electric Power Co. and its onsite crew do not appear to have control of the situation.

The measures the Japanese are taking are "not in the playbook for these types of accidents," Alvarez said. Using seawater as coolant is risky because the water is corrosive and at high temperatures can corrode pumps and pipes and could impair the containment vessel, he said. The spent fuel pools are also of extreme concern because they are elevated above ground, not under the containment dome like the reactors themselves, and aerial photographs show two pools are "exposed to open sky."

Jaczko this week expressed concerns that the United States believes water has completely or partially been drained from a spent fuel pool at the reactor and could catch fire, Alvarez said, pointing out that the chairman's comments are "also vetted by the White House."

Alvarez said the danger surrounding spent fuel pools in Japan has serious implications for the United States because many of the plants here store spent fuel in pools that are at maximum capacity.

The experts briefing reporters today also questioned the federal government's assertions that the United States will not experience dangerous levels of radioactivity from the Japanese reactors.

Although the risk right now is "fairly minimal," officials should be cautious because there is "no safe level of radioactivity" and it's much too early to tell how far radioactive material can travel, said Jeffrey Patterson, a radioactive exposure expert and professor at the University of Wisconsin.

Alvarez said the United States should pay full attention to the radiation monitors that have been expanded around the Fukushima Daiichi plant and radiation equipment being used by U.S. and Japanese military aircraft to understand the extent and travel of plumes the facility and where they will travel.

"I think it's going to be extremely important for the Japanese [and] U.S. government ... to be very transparent about the nature of these plumes and what precautionary measures people should take," he said.