

U.S. Nuclear Energy Industry Strengthens Safety with Learnings from Fukushima



NUCLEAR ENERGY INSTITUTE

February 24, 2016 14:51 ET | **Source:** Nuclear Energy Institute

WASHINGTON , DC,, Feb. 24, 2016 (GLOBE NEWSWIRE) -- In the five years since the Fukushima Daiichi accident, U.S. nuclear energy facilities have invested more than \$4 billion and devoted thousands of person-hours to better ensure safety in the face of extreme events, the Nuclear Energy Institute announced during a briefing today.

"The safety enhancements have been significant," said Maria Korsnick, NEI's chief operating officer. "They are based on well-defined lessons learned from Fukushima. Their development and implementation has been coordinated by chief nuclear officers and technical advisors throughout the industry and they are being implemented at all U.S. nuclear power plants."

Korsnick chaired a committee of industry chief nuclear officers who developed the U.S. response to lessons learned from the Fukushima accident. Her remarks came during a briefing that included presentations from Takafumi Anegawa, chief nuclear officer for Tokyo Electric Power Co. (TEPCO), and Dr. Dale Klein, former chairman of the U.S. Nuclear Regulatory Commission and chairman of the TEPCO Nuclear Reform Monitoring Committee. TEPCO operated the nuclear power plant damaged by the March 11, 2011, earthquake and tsunami that devastated northeast Japan.

While Anegawa and Klein discussed recovery efforts under way in Japan, Korsnick detailed the significant steps taken in the United States to better enable nuclear energy facilities and employees to safely mitigate the impact of low-probability, high-consequence events. Nuclear power plants operating in 30 states supply 63 percent of America's carbon-free electricity. In 2015, according to preliminary generation estimates, they achieved a record-high level of efficiency with an industry average capacity factor of 91.9 percent, far ahead of other electricity sources.

Chief among the safety enhancements is the FLEX strategy, which addresses the major problem encountered at Fukushima—the loss of power to maintain effective reactor cooling—by stationing another layer of backup safety equipment in well-protected locations at all plant sites. This flexible approach builds on existing, multilayered safety systems to protect against unforeseen events. The equipment ranges from diesel-driven pumps and electric generators to ventilation fans, battery packs, hoses, cables and

satellite communication gear.

The industry also established two national emergency response centers in Memphis and Phoenix, capable of delivering additional backup safety equipment to multiple reactor sites anywhere in the United States within 24 hours.

"The industry's top priority is the safe operation of nuclear energy facilities, which is reflected in record levels of safety in industry metrics tracked by the World Association of Nuclear Operators," Korsnick said. "The multiyear plan to effectively respond to the Fukushima accident shows the depth and scope of this commitment to safety by the nearly 100,000 men and women who work in the nuclear industry. It is their focus and dedication to excellence in safety that has resulted in the safe operating record industrywide, and their continued dedication will carry this safety record into the future."

Existing safety measures at U.S. nuclear plants were verified by the industry in the days and weeks after the event in Japan. Following a series of rigorous safety inspections, the NRC determined that all U.S. nuclear energy facilities were safe. The industry then invested billions of dollars to ensure that U.S. reactors can withstand natural events more severe than those assumed in their original design, to upgrade and expand safety equipment, and to train plant workers on new equipment and procedures to enhance emergency response capabilities.

The industry has taken additional actions including verifying seismic and flooding protection at nuclear power plant sites, installation of new instrumentation to improve reactor operators' ability to monitor fuel pool conditions, improving the integration of existing emergency operating procedures to enhance emergency response capabilities, and enhancing containment venting strategies for certain reactor designs. The industry will fully implement virtually all of the high priority safety enhancements by the end of 2016, with the remaining improvements to be in place by 2019.

Close coordination among the Electric Power Research Institute, the Institute of Nuclear Power Operations and NEI led to the formation of industry's Fukushima Response Steering Committee, comprised of industry leadership and expertise across all facets of nuclear plant operations.

In September 2013, chief nuclear officers representing all of America's operating commercial nuclear energy facilities participated in a week-long safety-focused visit to Japan that included tours of the Fukushima Daiichi and Daini plant sites and meetings with the chief nuclear officers representing all Japanese reactors. This unprecedented exchange among more than 20 U.S. chief nuclear officers and their Japanese counterparts was conducted so the American contingent could see first-hand the impact of the Daiichi accident, as well as to facilitate lesson sharing and discuss the safety culture within the U.S. and Japan nuclear energy sectors.

During the briefing, NEI released its Way Forward document summarizing post-Fukushima safety enhancements.

Contact NEI's media relations staff at ,



202.739.8000 during business hours or



703.644.8805 after hours and weekends.

Related Articles

other press releases by *Nuclear Energy Institute*