

# Upstate reactors, dams get checked

## East Coast earthquake reignites calls for stronger safeguards

By Anna Simon

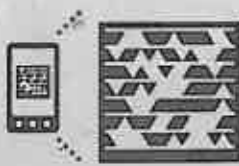
Clemson bureau  
asimon@greenvilleonline.com

A magnitude 5.8 earthquake that was felt across the Eastern seaboard Tuesday and caused two reactors to shut down at a Virginia nuclear power plant sparked predictions that the nuclear industry will re-evaluate safety standards and reignited calls for stronger safeguards recommended by a task force after an earthquake and tsunami triggered reactor core meltdowns in Japan.

The large inland earthquake "was not a complete surprise" because there have been smaller magnitude 5 earthquakes in that area, said Pradeep Talwani, founding director of the South Carolina Seismic Network and emeritus professor of earth and ocean sciences at the University of South Carolina.

Talwani said he believes the earthquake will trigger a new look at the seismic stress inland nuclear plants such as Duke Energy's Oconee Station, 30 miles from Greenville, and huge structures such as Duke's Lake Jocassee dam upstream from Oconee's three reactors on Lake Keowee are built to withstand.

Oconee and the Jocassee dam are designed to withstand the degree of shaking that would be expected here from a coastal earthquake equivalent to the one in 1886 in



Get the free mobile app at <http://gettag.mobi>

See Greenville residents share their earthquake experiences by scanning this tag or going to [GreenvilleOnline.com/video](http://GreenvilleOnline.com/video)  
» Earthquake rocks, shocks millions. 3A  
» Quake rattles nerves in Upstate. 1B

Charleston, said Sandra Magee, a Duke spokeswoman.

The Charleston earthquake, the largest in state history, was estimated at magnitude 7.3.

"I have lingering concerns if the older reactors in this state could withstand a sizable earthquake," said Tom Clements, former director of the Nuclear Control Institute and regional nuclear campaign coordinator for Friends of Earth.

Japan's recent earthquake damaged the Fukushima Dai-ichi plant even before the tsunami hit, showing that an earthquake alone, "without other events can cause a serious accident," Clements said.

"This earthquake is a wake-up call to rapidly implement the findings of the Fukushima task force and to overcome industry

## QUAKE

Continued from Page 1A

and NRC foot-dragging against strengthening nuclear reactor safety regulations," Clements said.

Magee couldn't specify what magnitude Oconee is built to withstand, saying the formula is based on G-force. Duke plants are designed to withstand the worst historic earthquake for the region where they are located, Magee said.

In addition to ongoing analysis of events in Japan, Duke "certainly will be looking at any information" learned from the Virginia earthquake and will make any changes deemed necessary, Magee said.

Duke inspected its Jocassee, Keowee and Bad Creek dams Tuesday and did walkdowns at Oconee Nuclear Station and all its other facilities in the Carolinas as a precaution after the Virginia earthquake, Magee said.

There wasn't enough seismic activity to trigger alarms on monitors at Oconee or the dams and there was no impact on the plant, she said.

The quake knocked out power at Dominion Virginia Power's North Anna plant. Both reactors were manually shut down without incident and no damage was apparent, The Associated Press reported.

One of the four backup diesel generators at North Anna failed about 30 min-

utes after starting up, but the other three were operating and powering safety systems, said Joey Ledford, a Nuclear Regulatory Commission spokesman.

Seismic activity detected at 11 nuclear power plants, including the Shearon Harris plant near Raleigh, caused declarations of an "unusual event"—the lowest emergency classification, Ledford said.

All 11 continued to operate while plant personnel examined their sites, according to the NRC.

Oconee doesn't have diesel generators to provide emergency cooling like North Anna, and instead has other ways of generating emergency power to the plant, including pulling it in through the grid and from its Keowee hydro plant, Magee said.

Oconee has a backup diesel generator to power

its standby shutdown facility, Magee said.

Even as Oconee and other nuclear plants reacted to the Virginia earthquake, they continued preparations as Hurricane Irene continues a path toward the Carolina coast, Ledford said.

Duke is watching weather patterns and assessing resources, including staffing and equipment, Magee said.

Duke has a storm response plan and is checking on equipment, supplies and inventory to make sure there's adequate material to make repairs and restore power, Magee said.

The NRC requires safety-significant structures, systems, and components be designed to take into account the most severe natural phenomena historically reported for the site.