Oconee Nuclear to lead nation in digital conversion



A crew works in the control room at Oconee Nuclear Station File

Critics say need for modern controls points to issue of aging reactors

By Anna Simon, CLEMSON BUREAU, asimon@greenvillenews.com

The nuclear industry will be watching as Oconee Nuclear Station converts one of its reactor's control room safety systems from analog to digital in 2011 — the first such conversion at any of the nation's nuclear power plants.

"A number of utilities have held off on a similar effort until they've done it here because they want to see how it goes," said Joey Ledford, a Nuclear Regulatory Commission spokesman.

The conversion will be made this spring, while Unit 1 at the three-reactor station is shut down for its scheduled refueling and maintenance, said Robert Cook, a Duke Energy spokesman.

"Technology has changed. We're continuing to make sure our plant infrastruc-

See OCONEE on page 3A

OCONEE

FROM PAGE 1A

ture is up to date and reliable to provide safety to our employees and to the customers we serve," he said.

The digital conversion will be completed for all three control rooms by the end of 2013, Cook said. Unit 3 is next, during a refueling outage in spring 2012. Unit 2 will be done in fall 2013.

Duke Energy is spending $2 billion to update the nuclear plant that marks its 38th year of operation this year. Plans are to keep it running for 20 more years.

The station cost $500 million to build in the late 1960s and early 1970s.

Other projects at the plant include modifications to add protection against tornadoes, fire and breaks in high-pressure lines carrying high-temperature steam or water. These will update the plant to more current standards, plant and NRC officials said.

Oconee was the nation's second nuclear station to be relicensed for another 20 years of service. The original operating license would have expired in 2013 for Unit 1 and in 2014 for Units 2 and 3. The renewed operating license extends to 2033 for Unit 1 and 2034 for Units 2 and 3.

The facility at Lake Keowee that employs about 1,300 is a substantial energy producer. With its three reactors, Oconee ranks second in the Southeast in its capacity to produce nuclear power, to NRC data show. It is the largest of Duke's three nuclear stations that together create half of the electricity the company provides in the Carolinas.

At the same time, critics question the fitness of aging nuclear power plants.

Tom Clements, Southeastern nuclear campaign coordinator for Friends of Earth, said the upgrade is essential.

"The fact that a series of unique upgrades are being undertaken carries with it an implicit admission that the aging Oconee reactors and their current safety and control systems pose a risk that must be addressed," Clements said.

Andy Sabisch, the NRC's senior resident inspector at Oconee, said the new digital system directly addresses the aging issue and problems such as availability of older components.

"It will in essence give them the ability to go not to the end of their 40-year but the additional 20-year life extension, and to do so in a way that they can upgrade components a lot easier in the future because digital components will be easier to replace and the software code will be easier to maintain," Sabisch said.

The system also will be more reliable, he said.

"It's going to make it a more robust system and make it so you can maintain this through the remaining life of the plant," Sabisch said.

The NRC is monitoring the upgrades at Oconee.

A quarterly status meeting is scheduled Wednesday at the commission's Atlanta office to discuss the progress of the upgrades, and NRC inspectors will observe and monitor installation of the new system. There will be oversight and inspection by resident NRC inspectors at the site and by regional NRC specialists, Sabisch said.

The equipment is on site and has been running through testing since May, Sabisch said.

"Digital is primarily computer-driven, instead of having relays and a lot of physical components," Sabisch said. "They want to be sure every possible scenario thrown at it works. That it performs the way it's supposed to."