LOCAL NEWS

Oconee nuclear gets nation's first digital makeover

New safety systems to replace 1970s analog controls

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SENECA — A $250 million digital upgrade of major safety-related systems at Oconee Nuclear Station will be the first of its kind at the nation's 104 nuclear plants and will replace 1970s-era analog controls.

A license amendment, recently approved by the Nuclear Regulatory Commission, was required before Duke Energy could install the computer upgrade that will replace analog, solid-state controls for the plant's reactor protection system and engineered safeguard protection system.

Oconee is the first of the nation's nuclear power facilities to be approved for an upgrade that's this extensive. The NRC has previously approved single safety-related digital control upgrades elsewhere, said Joey Ledford, an NRC spokesman.

Installation planning has started, said Sandra Magee, a Duke spokeswoman.

The $250 million upgrade will "give us some benefits in our operations and our maintenance because it will be able to detect instrument problems sooner and it will do so automatically through an online diagnostic system," Magee said.

Duke submitted its Oconee-specific application in January 2008, supplementing its supporting information numerous times through December 2009. "At Oconee, it is much more extensive and involves the entire safety-related control room systems," Ledford said.

"We found that this (1970s era) equipment continues to be very reliable — it's just a matter of making it more modern and more reliable."

The upgrade, to Teleperm XS digital computer-based equipment, is part of the utility's operations and maintenance expense and shouldn't impact customer cost, Magee said.

"It's part of our ongoing, continuous improvement we make to the plant every year," Magee said.

Tom Clements, Southeastern nuclear campaign coordinator for Friends of the Earth, said he is surprised the nation's nuclear reactors still operate on such old control systems.

"Perhaps Duke can play a leadership role here and others will catch up with the modern age in their control systems," Clements said.

Clements, of Columbia, said he's "a little uncomfortable" that Oconee — in South Carolina — is "the guinea pig." He said he hopes all "glitches have been ironed out," and that there are adequate backups "in case the computer system goes down."

Magee said there the system has "redundant channels" that provide backups to the main channel in the new system.