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News Release

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AUB ENERGIZES NEW POWER SUBSTATION

ATHENS, Tenn. – The Athens Utilities Board (AUB) will soon energize a new \$2 million electric power substation that will provide much needed system redundancy and will help ensure adequate power supply for growth in the coming decades.

The new West Athens substation, located at the intersection of G.R. Price Boulevard and Denso Drive, will provide the major component in a critical redundant source of power for AUB's service territory and will support the I-75 Industrial Park and Highway 30 area near the interstate.

AUB Power Superintendent Nick Fortson said that the new substation was sorely needed, as the existing North Athens facility located on Ingleside Avenue has long been the sole source of transmission power for the community and surrounding areas.

“Athens has been dependent on one source of 69kv transmission to power all of AUB's 12kv distribution substations. A second source was needed for the reliability of our system so that the community is not put in the position of being without power for an extended time if the North Athens substation were to suffer a catastrophic outage,” Fortson said.

A megawatt represents one million watts of power; one kv represents a thousand volts of energy. The peak load—the point of highest seasonal demand—for AUB's power system is around 120 megawatts, all of which has been supported via the North Athens substation, Fortson said.

Fortson said that the new substation is capable of providing 60 megawatts at 69kv and 25 megawatts at 12kv. Therefore, he explained, the combined capabilities of the North Athens and West Athens facilities ensure ample supply for AUB's peak demand needs now and for future growth.

In building the new West Athens substation to bolster system reliability for the community, AUB included an additional transformer to serve the I-75 industrial park and the commercial area at Highway 30 and I-75.

“This was a cost effective measure to use AUB's existing power distribution lines, tied into the new substation's lines, to provide redundancy and enhanced reliability for years to come,” Fortson said. “The new substation, coupled with planned upgrades on the North Athens sub, should ensure a reliable source for the next 20 to 30 years.”

AUB will continue to refurbish existing facilities and to plan other 12kv distribution substations to accommodate future growth and expansion of the service territory.

Enhanced technology from the new substation provides further system reliability, Fortson said.

“We will use fiber optic cable to connect digital relays with our control systems and will eventually tie this into a fiber loop for improved control and monitoring. Using fiber optics will help eliminate induced voltage surges and transient voltages on that part of the distribution system because fiber is not conductive,” he explained.

A transient voltage is any change in voltage, such as a spike, that is unexpected, undesirable, and often destructive. Lightning, industrial electric motors, and static discharges all can create such voltages. Lightning is also a common cause of induced voltages. Even cloud-to-cloud lightning strokes can cause lights inside a building to become brighter for a moment. Although the lightning may not actually hit an object on the ground, the electromagnetic field that the lightning produced does. The magnetic field generated by the lightning *induces* a surge voltage into every conductive material nearby, including all the electrical wiring inside a building.

AUB General Manager Eric Newberry sees construction of the new substation as a key piece of AUB’s long-term vision to support a growing Athens and McMinn County.

“Our customers deserve the most reliable system we can afford to give them. The measure of redundancy provided by the West Athens substation does just that. Furthermore, every citizen wants good jobs for themselves, their kids, and their neighbors not just today, but as future generations enter the workforce,” he said.

“Good jobs in a growing region rely on planned industrial expansion and commercial growth. A solid utility infrastructure is the backbone of this type of development,” Newberry said. “We are excited and proud to continue to help lead that effort along with our counterparts in the city of Athens, our neighboring cities, and McMinn County.”

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