Bristol Virginia Utilities Board Energizes First North American UCA Substation

Municipal utility using GE Power Management's Universal Relay to automate substation functions

Markham, ON, March 21, 2001 -- GE Power Management is pleased to announce that the Bristol Virginia Utilities Board (BVUB) has just gone live with a fully integrated, automated substation integration system that uses the power and the flexibility of GE Power Management's Universal Relay (UR) technology. BVUB is one of the first municipal utilities in North America to use the UCA-based protocol to develop a complete substation automation system. The substation design and automation system was developed, tested and installed by Mesa Associates, Inc. of Chattanooga, TN.

BVUB is a municipal utility that services 16,000 customers in the region of Southwest Virginia. The automation project is part of a complete substation overhaul that included the installation of two D60 Line Distance Relays, one T60 Transformer Management Relay, and seven F60 Feeder Management Relays.

Greg Lusk, Senior Electrical Engineer for Mesa Associates, Inc., explains, "Although BVUB were initially looking at putting SCADA on a system, we felt they would be better off going with a UCA-based architecture that would allow them to use their enterprise network to distribute information. By using the UR and its advanced peer-to-peer communications capabilities, BVUB could not only save in RTU (remote terminal unit) and cabling costs, it could easily leverage the resources of an existing fiber optic network that had been installed to service regional offices and schools."

Lusk adds that with the peer-to-peer communications capabilities of the UR, they were able to eliminate a number of hardware elements used in more conventional SCADA environments. "We didn't need interposing relays, bus differential relays, transducers, control switches, control panels, or meters. With a UCA-based system, all those capabilities can be managed through the Human Machine Interface. We believe that UCA is by far the simplest and cost-effective protocols to integrate. Now communications can be managed by cell phone, pagers or email."

Robert Snodgrass, Director of Engineering and Operations for BVUB, confirms, "We were convinced that the GE relays, along with our fiber system would prove to be a cost-effective means to automate. While a traditional SCADA system is proprietary and requires RTUs, using a UCA-based system meant we would not have to run miles of wiring and we could substantially reduce our hardware needs. In addition, the FlexLogic programming features of the UR would allow us to design the system we wanted at minimal cost."

"This automation scheme simplifies everything for us," continues Snodgrass. "It's quicker to implement and more cost-effective. In addition, any authorized user from the control room or anywhere else they might happen to be, can log into a relay to take readings. We can even do diagnostics with Mesa over the Internet. I particularly like the oscillography feature, which allows us to remotely analyze the duration and magnitude of a fault – not to mention all the other features that go along with event and data logging capabilities. I expect we will be seriously considering the UR as we upgrade our other sites over the next For Immediate Release

few months."

Norris Woodruff, general manager for GE Power Management, says that BVUB is a leading example of how utilities can leverage existing and new resources to develop fully automated, cost-effective automation solutions. "A UCA-based architecture is definitely the direction that utilities should be going as they move towards substation automation. For BVUB especially, having a fiber optic network already in place made the process all that much easier. Now they can perform complete monitoring and control functions based on standard protocols that can be easily integrated as their needs evolve."

About the UR

GE Power Management UR products are PC-based solutions that support the open standard EPRI UCATM MMS/Ethernet protocol. All UR products combine peer-to-peer high-speed communication capabilities with modularity, flexibility and field-programmable FlexLogicTM control for simplified substation automation. UR products include the F35 Feeder Protection Relay, the F60 Feeder Management Relay, the C30 Controller, the L90 Line Differential Relay, the C60 Breaker Management Relay, the T60 Transformer Management Relay, the L60 Phase Comparison Relay, the B30 Bus Differential Relay, and the D60 Line Distance Relay.

About GE Power Management

GE Power Management, based in Markham, Ontario, Canada, specializes in the design, manufacture, sales and service of protection, metering and control equipment as well as automation systems for generation, transmission, distribution and for industrial plants around the world. For more information, visit the website at <u>http://www.GEindustrial.com/pm.</u>

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