

Additions to Microwave System Address Growing Needs

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In 2008, South Mississippi Electric advised Southern Company of its intent to take over generation responsibility for thirteen Member delivery points in the Mississippi Power Company service area in April 2011. These loads, which total approximately 145MW, are presently designated as Market Based (MB) loads due to the nature of rate provisions in the existing operating agreement.

In order to meet reliability standards associated with measuring and monitoring the new loads, SME must replace the existing metering equipment at the affected delivery points with its own metering and communications equipment. Currently the Association has such capability only at delivery points within the on-system transmission service area. An extensive expansion of SME's existing digital microwave network is now underway to provide the communications backbone and infrastructure necessary for serving the converted MB load. The new system will relay real-time telemetering data from each of the acquired delivery points to the control center, providing the information required for the Association's generation resources to instantaneously respond to constantly-changing demand.

"The telemetering data is critical for ensuring proper generation dispatch to match the real-time needs of the new loads," said Richard Ashley, design engineering director. "Due to the essential nature of such communications, the network expansion must be designed for a high level of reliability utilizing both route diversity and equipment redundancy." The new network will also allow for future options related to enhanced consumer usage and demand response. "The construction of an adequate and flexible communications infrastructure is the fundamental first step in building the Smart Grid," Ashley noted. "When people talk about a Smart Grid, they are essentially talking about communication from the generator to beyond the distribution meter, with multiple points of control and monitoring in-between. This project lays the foundation for that communication by providing the backhaul or transport network for high volumes of data and voice communications."

Overall, the project will add nine new towers or monopoles, equipment and buildings to accommodate nine new six-gigahertz licensed communication paths in the Borderline (MPCo) transmission area. It will also add 1.14 miles of new fiber optic cable to connect with the existing fiber system, as well as two new 2.4-gigahertz paths. In addition, the project will provide infrastructure for private data and voice connectivity between SME and the headquarters offices of Coast Electric and Singing River Electric.

Bids for the Borderline project were accepted in April, and construction is expected to be completed by the end of this year or early 2011. Planning is currently underway to conduct a similar expansion of the microwave system in the Entergy Mississippi (off-system) service area within the next few years.