

BPL: Rural America's Key to Tomorrow's Broadband Services

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In the 1930's only 10 percent of rural American households were served by electricity. As the REA and the TVA brought power to unserved regions, public power companies were faced with a double challenge. Not only did we have the duty of building infrastructure that would take electricity to the countryside, but we also had to educate our communities on how this new technology could be applied to enhance their lives.

Seven decades later, we face the same challenge. But instead of electricity, it is broadband service that is on course to change our lives. The delivery of voice, data and even video at high speeds is the culmination of years of research and development that began with basic consumer dial-up service in the early 1990's. I do not believe it is an exaggeration to say that broadband service is the single most important technological issue of this generation, and that it will have the greatest impact on society since basic electricity and telephone service.

At Cullman Electric Cooperative, we have kept a watchful eye on an emerging technology known as 'broadband over power lines,' or BPL. The possibilities are incredible. As Michael Powell, chairman of the Federal Communications Commission, told Business Week earlier this year: "Think about it... if every electrical plug becomes a broadband port, that would be huge."

Our interest in this issue naturally stems from the fact that it could dramatically impact our industry. But beyond that, we see BPL as a technology that could become particularly important to homes and businesses in rural areas like those served by Cullman Electric Cooperative.

The industry has moved beyond the question "can voice, data and video be transmitted effectively, safely and rapidly over power lines?". Research has provided an affirmative answer. Now the questions are "can this technology be deployed to the masses economically?" and "will the equipment stand the test of time?".

To help answer these questions — and new ones as they arise — Cullman Electric Cooperative is involved in one of the few live BPL pilot programs going on in the nation. We have partnered with International Broadband Electric Communications, Inc. (IBEC) of Huntsville, Alabama, to turn our lines and poles into a research facility. IBEC's knowledge of BPL technology is joining forces with our experience and expertise as an electric utility to validate two distinct BPL applications.

The first is distribution system security through video surveillance. IBEC's equipment is consistently sending real-time video of a stretch of power line and our headquarters back to a designated central monitoring facility. This could prove invaluable as our industry moves toward more stringent security regulations, allowing us to forego considerable costs by using existing infrastructure to transmit video.

The second application is broadband Internet service to locations within our system. I am pleased to report that several of our members are involved in this pilot, and that they are successfully uploading and downloading data through an 'always-on' Internet connection via an electrical outlet.

There are still other applications of this technology to explore. Cullman Electric Cooperative could one day monitor and control our remote equipment through BPL. This technology could also allow us to read our meters remotely.

Another exciting possibility is a wireless network that would allow any customer with a password to access the Internet from any location that was near a power line — in their home or office, on the road or on a park bench.

Studies estimate that 37 percent of Americans live in areas that most likely will never be served by broadband service via cable or DSL. I believe our customers should be able to enjoy the benefits of rural life without being left behind in terms of technology. BPL may well be the means whereby public power companies once again take bold steps — just like we did 70 years ago — to bring the power of technology to rural America and thereby change people's lives for the better.