

## After Years In The Dark, Utilities See The Light

By Lisa DiCarlo

Forbes

March 18, 2005

[http://www.forbes.com/intelligentinfrastructure/2005/03/16/cx\\_id\\_0317bpl.html](http://www.forbes.com/intelligentinfrastructure/2005/03/16/cx_id_0317bpl.html)

NEW YORK - In February the New Millennium Research Council, a Washington, D.C., policy group, pronounced that 2005 could be the breakthrough year for a technology called broadband over power line, or BPL, where utility companies use standard power lines to deliver broadband connections to anyone with a power outlet.

It is compelling technology that could provide meaningful competition to cable and to broadband service providers for digital subscriber lines. But that might not even be the most interesting thing about BPL. What's groundbreaking is that utility companies are, for the first time, using modern technology like BPL to automate critical functions and manage their networks.

In most cases, there is little or no "intelligence" between an electric substation and a power outlet. That means that utility companies provide electric power pretty much the same way they did a century ago.

But that's changing.

Several municipal and investor-owned utilities are deploying BPL services to consumers to leverage their valuable infrastructure and drive new revenue, but also to manage their networks. The result will be better customer service, faster response to problems, lower costs and better profit margins.

In Manassas, Va., the municipal utility is using BPL for tracking power outages in real time, automated meter reading and remote switching, even turning on Wi-Fi hot spots.

"We can use the [BPL] infrastructure to serve multiple purposes," says John Hewa, director of utilities for the city of Manassas.

Those purposes could also include automated customer service, remote monitoring and remote control of substations.

**Plexeon Logistics**, a Stamford, Ct.-based BPL integration company, says many utilities are looking to set up intelligent power grids. "The utilities are looking at all the applications that BPL provides," says **Lance Rosen**, Plexeon's president. "It's not just about consumer [broadband] services."

These kinds of internal services could increase the value of BPL applications to utility companies that are grappling with the business case and the business model of selling Internet services to their power customers.

Right now, the reality is that many often-mentioned BPL rollouts are tiny.

The biggest rollout is **Cinergy** (nyse: CIN - news - people ), a Cincinnati-based utility that serves 2 million customers in Ohio, Kentucky and Indiana. It has partnered with **Current Communications** to deliver broadband. Neither company will say how many broadband subscribers they have, only that the service is offered to about 50,000 households for between \$30 and \$40 per month based on transmission speeds.

**Jay Birnbaum**, vice president of Current, says that 40% of its subscribers switched from dial-up Internet service. "We are expanding the market for broadband," he says.

He says Current and Cinergy plan to offer Internet phone call services (called voice-over-Internet protocol) to the package by October. When it rolled out the service commercially in the spring of 2004, Current said it planned to offer it to 250,000 homes in three years, a number that Birnbaum refers to as "still the number, basically the reference point."

Cinergy has undertaken a business model where Current maintains the BPL equipment and is in charge of marketing and billing for the service. Cinergy simply provides the gateway, the pipes, to consumer's homes and therefore assumes less risk. Other utilities are examining this model with mixed results.

**Ameren** (nyse: AEE - news - people ), a St. Louis-based utility, has been pilot-testing BPL in one section of one city and has determined that it wants to share the burden. "We are exploring a joint venture with a BPL provider to share [costs] and for maintenance and deployment," says spokeswoman Erica Abbott. "We have not determined if it makes a good business case against our core business."

She says Ameren is not sure if it will continue with a commercial BPL rollout if it fails to secure a partner. Why is it bothering at all? "Because it's an interesting way to leverage our assets."

According to Leichtman Research Group, there are only 33 million broadband subscribers in the U.S., hardly a number that can be considered saturation. That number is expected to double within five years. Utility companies "are going to be the third provider of this technology except in very rural areas," says Bruce Leichtman.

Indeed, connecting customers outside the borders of other broadband providers (the so-called "last mile") has been a prime selling point of BPL.

But in Oregon's Douglas County, customers are so rural that it may be cost-prohibitive for the electric co-op that provides power, Douglas Electric Cooperative, to reach them. "On average, we have five customers per circuit mile," says Superintendent Mark Doty. "The customers per transformer make [the economics] tough."

Doty says he's looking at utility applications for BPL as a potentially more attractive option. "Anything with an IP address can be plugged into the system and monitored."

Either way, there are more than a dozen BPL equipment providers that should reap the benefits: Main.net; Amperion, funded in part by **Cisco Systems** (nasdaq: CSCO - news - people ); Current Technologies; Ambient; and ComTek.

In reality, BPL will probably do more to benefit the utilities in the management of their power grids instead of being a panacea for the undeserved masses under the rubric of "broadband for all."

Utility applications for BPL--the smartening up of a dumb power infrastructure--may be the thing that justifies the technology for utility companies.

Leichtman says he expects most BPL subscribers to upgrade from narrowband connections rather than switch from other broadband providers. "The timing [of BPL] is not great because of how the market has developed, but if their goals are moderate, like any third player you might be able to get 20% share."