**REPORT: 2005 COULD BE BREAKTHROUGH YEAR FOR "BROADBAND OVER POWERLINE" SERVING U.S. CONSUMERS, BUSINESSES**

***BPL Offers "Third Wire" If Technical, Economic Challenges Overcome; Emerging Tech Already Here: BPL Deployed Commercially on City-Wide Basis in D.C. Suburb.***

**WASHINGTON, D.C.///February 24, 2005**///Broadband over powerline (BPL) technology may be "primed for real growth in 2005 and beyond" across the United States, according to a new white paper released today by the New Millennium Research Council (NMRC). Trials and actual commercial deployments of BPL systems are on the rise, with over 20 projects in operation in 2004 and more expected to come online in 2005. By one estimate, roughly a quarter million homes in the United States already had the opportunity to choose BPL services in 2004.

Entitled *"Powering the Broadband Market in 2005 and Beyond,"* the NMRC white paper asks: **"Is 2005 the year of BPL? There are a number of signs that suggest this could be the time the technology begins its emergence as a viable competitor in the broadband market … Today, electric utilities across the country are deploying the necessary technology to provide broadband and other advanced communications services, such as Voice over Internet Protocol (VoIP), via the power lines that connect to virtually every home and business. Many industry watchers and representatives now believe BPL can dramatically change the landscape of the broadband market, offering new forms of competition and delivering high-quality service to remote areas. During the past two years, the commercial and media perspectives on BPL in the United States have evolved from categorizing the technology as 'almost ready' to 'really here.'"**

Though still in its early stages in the U.S., BPL technology already is available in such places as sections of New York City (Ambient) and – in what is the first city-wide commercial BPL network in the United States -- in the suburban Washington, D.C. community of Manassas, Virginia (Communication Technologies, Inc., or COMTek). Both of the firms are profiled in the report, which was released at a phone-based news conference today that included a statement by COMTek President and CEO Joseph E. Fergus.

COMTek's Fergus said: **"The industry is finally moving beyond the theoretical stage to the real thing: actual commercial deployments of BPL that are being pioneered today by companies like COMTek. BPL isn't the answer for every community and, in some cases, the technology is likely to be blended with other broadband platforms in order to provide the widest possible coverage. But the bottom line is unmistakable: BPL is finally here in a real way that will touch the lives of millions of additional U.S. consumers and businesses in 2005 and beyond."**

Another NMRC news conference participant, Robert Olsen, professor of electrical engineering at Washington State University, said: **"It is possible to deploy BPL networks that will offer data rates comparable to those of DSL or cable model systems. It is doubtful, however, that data rates significantly higher than this will be possible without a very significant investment in 'conditioning' the power system. While numerical limits on electromagnetic emissions set by the FCC can be met, it will depend upon exactly how the FCC defines harmful interference."**

Also speaking at the NMRC media briefing was Harris Interactive Vice President & Senior Consultant Barry Goodstadt, who said: **"There are challenges that remain for BPL, including mitigating interference and constructing viable business models to attract more customers and create more revenue. Experts feel that while the technology might be ready, electric utility companies and their partners still need to find ways to effectively compete in the broadband market. Regulators and policymakers are working to create clear rules for BPL and this could help utilities develop business plans that work."**

The full text of the NMRC report is available online at http://www.thenmrc.org.

## HOW BPL WORKS

Broadband over power line (BPL) is the transmission of high-speed communications services, including Internet access, over the existing electric infrastructure using adaptive technologies. The wires that carry electricity, either on poles above ground or through tunnels underground, possess the capacity to also serve as a conduit for data signals. These power lines are known as medium voltage, carrying between 1,000 and 32,000 volts of electricity and travel the distances between power substations and the customer's household or building. The power lines that connect to a household or other building from the utility pole are known as low voltage, transmitting 120/240/480 volts.

By bundling radio-frequency (RF) energy on the same line with the electric current that is already carried, data can be transmitted without the need for a separate line. Since the electric current, which is used to provide power to the end users, and RF energy signals carrying the data operate at different frequencies (with electric current traveling at lower frequencies and data at higher levels), the two don't interfere with each other.

Technological advances in the past several years have enabled electric companies to place devices along existing wires and poles to provide broadband services. Known as Access BPL, the systems require a connection from the Internet backbone at a power substation, repeaters (in some cases) and couplers along the medium voltage power lines that transmit the data signals, and then a final converter that transfers the signal from the medium voltage to the low voltage lines that go into homes. Once inside the home, the signal can be accessed at any electrical outlet with a BPL modem.

## ABOUT THE NMRC

The New Millennium Research Council is composed of a network of policy experts who develop workable, real-world solutions to the issues and challenges confronting policymakers. Its work has focused primarily in the fields of telecommunications and technology. For more information, please visit: http://www.thenmrc.org.

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**EDITOR'S NOTE:** A streaming audio replay of the phone-based news conference and related documents will be available on the Web as of 5 p.m. EST on February 24, 2005 at http://www.thenmrc.org.