BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF NEW YORK

Order Initiating Proceeding and Inviting Comments] CASE 06-M-0043
Filed January 26, 2006

COMMENTS OF NEW VISIONS PLC, LLC

IN RESPONSE TO ORDER INITIATING PROCEEDING AND INVITING COMMENTS TO THE NEW YORK STATE PUBLIC SERVICE COMMISSION TO EXAMINE ISSUES RELATED TO THE DEPLOYMENT OF BROADBAND OVER POWER LINE TECHNOLOGY

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I. Introduction

New Visions PLC, LLC ("New Visions") appreciates the opportunity to comment on the Commission's motion to examine issues related to the deployment of Broadband over Power Line Technologies. ("BPL") The Commission should be commended for its goals of establishing a flexible regulatory framework that promotes innovation and encourages economic investment in infrastructure. As the Commission recognizes, BPL has the potential to provide unique benefits to the State of New York. BPL provides a potential third source of facilities-based broadband competition to customers in the state, which would serve to increase competition,

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[1] NEW VISIONS PLC, LLC (NEW VISIONS") is based in Syracuse, New York and one of the leading providers of Broadband over the Power Lines. The Company designs, builds and provides the BPL technology and services for delivering broadband services using BPL technology. New Visions has begun to provide high-speed broadband services over existing electric power lines and in-home electric wiring. We represent some of the largest BPL manufacturers in the world

lower prices and bring new innovation to the marketplace. BPL will increase competition where only DSL and Cable Modem service alone are available. BPL will also serve to reach under-served rural areas in places where DSL and Cable Modem service cannot or do not reach due to technological or economic limitations.

In the area of utility applications, BPL creates a potential source of communication throughout the utility grid. BPL enables utilities to implement automatic meter reading, remote shut-off, real-time identification of outage locations, demand monitoring management, automated power outage and restoration detection, power quality monitoring, load management and demand side management.

The Commissions proceeding inviting comments follows rules that have been adopted over the past year and-a-half by the Federal Communications Commission ("FCC")[2], BPL legislation enacted in Texas[3] last year and most recently by the Public Utility Commission in the State of California[4].

II. How Broadband Over Power Line Works

BPL consists of several technologies, each which uses the powerlines to transmit data to reach the "last mile" into consumers' homes and businesses. The injection point (backbone) into the BPL equipment is delivered through fiber and high-capacity wireless facilities. As an example, the diagram, which follows, shows the network architecture, using New Visions approach.

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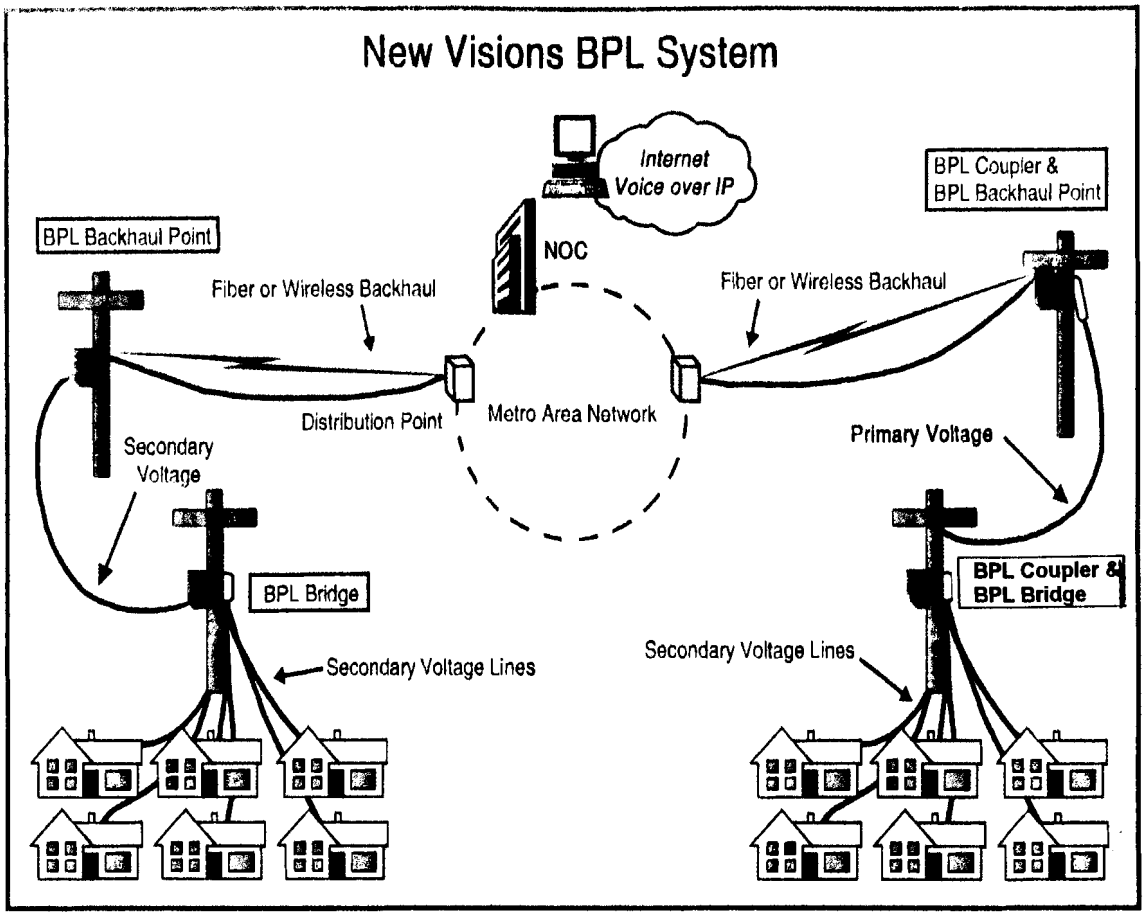
2 FCC 04-245 (2004) ("Report and Order")

3 See TX S.B. No. 5, "Use of Electric Delivery System for Access to Broadband and Other Enhanced Services, Including Communications,

4 R.05-09-006 California Policy on Broadband over Power Line



At the customer's home, he or she simply connects a powerline modem to their computer via an ethernet cable. The modem looks similar to the modems used for DSL and cable broadband. To make a connection, the modem is plugged into any electrical wall outlet in the home. Using an approved frequency set by the FCC[5], signals from the powerline modem travel over the homes low voltage wiring, outside the premise to an electric utilities grid. On the utilities network are step-down transformers[6]. In order to transfer the data signals from the electric network's

[5] 47 C.F.R. Part 15

[6] A step-down transformer is used by utilities to convert power from primary voltage (medium voltage) distribution lines into secondary (low voltage) for home use. On average, each step-down transformer serves about four to eight homes in the U.S.

secondary voltage to the primary voltage (and vice versa) it is necessary to bypass the step-down transformer. In New Visions case, a "coupler" is used to safely inject and extract data signals on and off the primary lines for connection to the secondary lines. The coupler is connected to a BPL bridge device, which serves as a gateway between the BPL network and the customer's premises. In New Visions BPL networks, the coupler and the bridge unit serve to bypass the transformer, isolating the electricity on the primary and secondary voltage segments and leaving the integrity of the electric grid intact while providing a separate high-speed broadband path along such wires. The data signals[7] travel over the primary voltage line until reaching the point at which New Visions links the electric grid network ("injection point") to our fiber or wireless network. A BPL coupler and bridge unit are used to retrieve the data signals from the primary voltage lines and the injection point on the fiber or wireless network used to backhaul the data signals to the Internet, voice, and other networks. Signals traveling to the customer premises travel the reverse path, where the fiber or wireless system inject the data signals onto the primary voltage lines, using a coupler and bridge. The signal then travels the primary and secondary lines to reach the customers premises.[8]

BPL equipment is unobtrusive. As is the case with most emerging technologies, the equipment continues to get smaller. For aerial grids, the BPL equipment is mounted on a utility pole, and for underground grids, inside or attached to a surface

[7] Data signals operate in the 2-80MHz spectrum as per the FCC's Report & Order ¶ 23

[8] Much of this design described is used by New Visions in rural areas and where underground electrical facilities are utilized. For overhead electric facilities, New Visions utilizes fiber and wireless systems deeper into the electrical network. In many cases, the primary grid is by-passed altogether and our injection point is at the secondary grid.

transformer enclosure. All installations and techniques are consistent with national and local safety standards.[9]

III. Status of the BPL Technology

The BPL technology that we have outlined is real and working. There are dozens of trials and deployments that are being conducted around the country.[10] The first commercial deployment began in the fall of 2004 in the City of Manassas, Virginia. Current Communications Group in a venture with Cinergy Corp. launched their commercial project in Cincinnati, Ohio in the spring of 2004. To date, Current has over 50,000 homes passed in its deployment. New Visions has started its deployment in Solvay, New York. New Visions broadband offerings provide 2-3 Mbps (symmetrical speeds) for $28.95 per month. Moreover, New Visions has been testing its VoIP service and have experienced positive results. We expect to begin testing IPTV before the end of this year. Currently, in over 70% of our orders, customers have requested high-speed Internet and VoIP. Half of our orders are converting from cable modem and DSL service. This fact alone represents a real competitive alternative to cable modem and DSL service. The other 50% of our orders represent customers that are switching from dial-up Internet access. This fact alone represents that BPL will have an impact in expanding broadband penetration.

A. The Deployment of BPL will Benefit Utilities

BPL deployments will aid utilities in the operation of their electric grid and provide additional efficiencies and customer services. Separate from a

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[9] In many cases, when the BPL injection point is on the secondary (not primary) lines, the only involvement of the electric utility is to bring power to the BPL unit which is installed in the "communication" space. Typically, in this design, external couplers are not required to be installed on the secondary grid.

[10] www.uplc.utc.org Industry View: BPL Deployment Map

broadband network, BPL can make the electric grid "intelligent." Pricing from current providers of data circuits have made the ability of monitoring the electric grid cost prohibitive. The BPL system will enable electric utilities to obtain information in real-time from points along the network (capacitor banks, switches, transformers, voltage regulators, etc) and transmit this information back to their network-operating center, thereby providing an "intelligent" grid. Many utilities have leased data circuits or fiber connection, for the purpose of monitoring their SCADA devices, to many of their substations that are located in urban areas. However, the added expense to deliver these circuits in rural areas makes it cost prohibitive. Utilities such as Centerpoint and others have begun looking into the opportunities a BPL-enabled grid can provide in operation, maintenance, efficiency and productivity. As a result, turning a "dumb" network into a "smart" network.[11]

B. Safety and Reliability of Service

To address the safety concerns the Public Service Commission and utilities may have regarding installation and maintenance of BPL systems, we believe only utility line crews (or utility-approved contractors) should install and maintain BPL equipment in the "electric space" on the utilities "primary" infrastructure. This practice is consistent with the requirements of the National Electric Safety Code. BPL equipment installed in the "communications space" should be required to follow the same installation and safety guidelines as that of the cable and telecom industry.

[11] BPL Today 2-13-06 " Centerpoint, IBM plan big "smart grid" BPL test

C. Applications of BPL Technology That Would Benefit Electric Utilities

BPL creates a potential source of ubiquitous communication throughout the electric utility grid. These potential capabilities include automatic meter reading, remote meter turn on-off, real time identification of outage locations, and the ability to predict and respond to outages. For example, BPL will enable the utility to use real-time data to monitor the overall network performance and detect problems in transformers, switches, capacitor banks, voltage regulators, substations, and transmit the information back to the utilities Network Operating Center. These performance irregularities might otherwise lead to service disruptions. Overall, the BPL technology will allow the utilities to become efficient and enable them to detect problems before they develop by scheduling routine maintenance. Currently, utilities are not usually aware of a power outage unless the customer has called to report one. The utilities ability to monitor their infrastructure and equipment in a real-time format will allow them to receive real-time outage and restoration notification. Similar to other data networks, an "intelligent" grid would allow the utility to predict and prevent problems, identify and take action to isolate failures, and respond to service issues in a timelier manner.

Many BPL systems can be operated with battery back-up in the event that electric utility power is disrupted. The cost is relative to the length of time the back-up is required to be maintained. Maintenance could be another issue. In a successful large deployment, there would be thousands of these BPL units installed. The ongoing cost to check, maintain and replace these batteries could be substantial.

IV. Business Model

We believe the most appropriate business model to deploy BPL base services is the landlord model where the incumbent electric utility is not the BPL provider, but rather leases access rights to their electric grid to a 3rd party unaffiliated business entity with the expertise, experience and resources to bring BPL service to the public. We agree that a high percentage of energy utilities that have made investments in competitive affiliates have had marginal success. With the bust of the fiber industry at the turn of this century, many utilities lost millions of dollars in the broadband business. The huge potential BPL could bring utilities and their ratepayers are streamlining efficiencies, cutting operational costs, and boosting reliability. And to the consumer, the landlord model will allow a BPL provider to deliver broadband to those that have none...and bring competition to markets that are dominated by the incumbent telecom/cable duopoly.

V. Regulatory Certainty

We believe regulatory rules are needed to create "regulatory certainty." Without this, IOUs are not interested in moving forward and little or no financial backing will come from Wall Street. The landlord model reduces the scope of the regulatory framework required for electric utilities. The actual installation of BPL on existing utility poles or underground facilities is similar to installations of cable and phone industry. BPL represents minor additions to the utility's infrastructure. Since BPL projects will be financed solely by shareholders and/or third parties at their own risk, your comments correctly specify that risks and rewards of BPL projects should flow to shareholders and third party investors. Uniform rules should be created in advance to

speed up the process for BPL deployment. Some of the issues that need to be addressed are (a) let the electric utilities lease utility property such as distribution lines for BPL projects without going through the lengthy review and approval process typically required, (b) utilize the same pole attachment agreements that are currently in place for the cable and telecom industry, (c) a utility may allow a 3rd party entity provide broadband services over the BPL system, (d) give the "investors" (shareholders) of the BPL company the right to keep the proceeds of any BPL project (e) reaffirm that the Public Service Commission would not assert regulatory authority over BPL projects or the services we offer. (f) if a utility enters into multiple BPL agreements, require one set of terms and conditions, so that similarly situated firms will be treated in a similar fashion. (g) costs that a BPL company may charge a utility for utility applications (for example, a utility may want to buy bandwidth for diagnostic monitoring or remote meter reading) can go into the utility's rate base and any utility operating expenses may be recoverable. (h) utilities may charge the owner of the BPL system a transaction fee for the use of the grid, and (i) allow the utilities to file an advice[12] letter describing the terms and conditions of their BPL agreement.

V. Roles and Relationships

As the Commission has concluded in its comments of this Order, structural separation implies no involvement by the electric utility in any of the roles and relationships. The extent of the utilities role should be deployments where BPL

[12] The use of an advice letters would allow the Commissions and interested parties with a notice of agreements and allow for their review. Minus protests or Commission action, the Commission rules would allow for the agreements to become effective without a Commission order. This would significantly reduce the time necessary for obtaining Commission approval.

equipment needs to be installed or maintained in the "electric space." Either the utility or approved contractors would be required for this process. This practice is consistent with the requirements of the National Electric Safety Code. Equipment installed and maintained in the "communication space" should require the same policy and procedures in place for the cable/telecom industry. Since the broadband services are being offered by a BPL provider, responsibility for customer service, billing, collection, and other issues and complaints should be directed to the BPL provider. As the Commission has outlined, and we have addressed in this report, a BPL-enabled electric grid offers a compelling savings in operations, efficiency and productivity for the utility. BPL creates a two-way communication network throughout those portions of the grid on which it is installed. This makes possible a significant number of utility applications ("AMR, remote meter turn on/off, real-time identification of outage locations") to be deployed that might not otherwise be made available. New Visions will work with the electric utility to provide the broadband network that will enable the utility applications to be deployed. By creating a smart grid and smart meters, utilities will know exactly how much electricity is being used at different times of day thereby creating real-time pricing structures. This variable pricing will lower costs both to cost-conscious consumers and to utilities that save money when the peak usage is reduced. These applications are consistent with the requirements set forth under the Energy Policy Act of 2005.[13]

[13] The Impact of the Energy Policy Act on Utility Communications Operations and Services Report published by the law firm of McDermott Will & Emery, August 2005.
The Energy Policy Act was signed into law by President George Bush on August 8, 2005. One of the provisions of the Act states that, by February 2007, each electric utility must offer each of its customer classes a time-based rate schedule (e.g., time-of-use pricing, critical peak pricing, real-time pricing, etc.) that enables the consumer "to manage energy use and cost through advanced metering and communications technology." Utilities must provide each individual customer who requests a time-based rate schedule with a time-based meter and communications device and must also make the same service and devices available to retail electric consumers who receive their electricity through third-party marketers.

VI. BPL Will Enhance Facilities-Based Competition In New York State

New York State is second in the nation in the number of broadband lines (2.8 million +) and has over 7.6% of the overall broadband penetration in the United States[13]. This Commission is consistently looking for technological advances and significant events occurring in the telecommunications industry to offer the consumer considerable telecommunications choices utilizing differing technological platforms.[14] The FCC Broadband report, however, also establishes that not all New Yorkers have access to or use broadband services. While this report is open for debate, it is clear that a substantial number of New Yorkers lack access to cable modem or DSL service. Both technologies serve limited areas. DSL has technological limitations which leaves out many homes even in urban along with rural areas. In many areas across the State, one-way video cable systems require a major upgrade to carry two-way broadband. The cost of such may only make economic sense in certain areas. Additionally, in many areas of the State, cable systems do not offer services within the business districts of the town they serve.

It has been said that a duopoly does not make for competition. In areas already served by cable modem and/or DSL service, BPL will provide an additional broadband alternative, thereby, increasing competition. BPL also has advantages over the existing technologies. Unlike existing broadband technologies, BPL speeds are symmetrical. The customer receives the same speeds whether they are downloading or sending a file. In today's world of technology advances of digital cameras, music and

[13] FCC Report, Published July 2005. "High-Speed Services for Internet Access Status as of December 31, 2004
[14] Case 05-C-0616, Proceeding on Motion of the Commission to Examine Issues related to the Transition to Intermodal Competition in the Provision of Telecommunications Services, Order Initiating Proceeding and Inviting Comments (issued June 29, 2005)

video storage devices, and internet gaming, symmetrical speeds are becoming an important requirement. We currently are achieving 2-3 Mbps symmetrical to the home. It is our intent to be providing 15-20 Mbps at every electric outlet of a home or business with the introduction of IPTV.

With the demise of the fiber bust at the turn of this century, it is evident that new facilities-based build outs to the home and business across New York State will be minimal. Typical fiber build outs that the ILECs may be deploying are in urban areas with a high concentration of homes per mile. The existence of a third broadband pipe to every home and business is critical to the future of competition in broadband services.

VII. Conclusion

We believe that this Commissions initiative on BPL will soon provide residents in the State of New York an alternative technology that will offer exciting new broadband services and features at competitive prices affordable to all New Yorkers.

It will be important to eliminate regulatory uncertainty over the manner in which the Commission will treat BPL. The Commission must address these issues that will otherwise stifle investments in a potential third facilities-based competitor. In doing so, the Commission will make a significant contribution to increased accessibility of broadband networks. Equally as important, we believe BPL utility applications will provide for tremendous changes in that industry as well. ***Probably more than any other industry, it is time for this important infrastructure to be modernized.***

The Commission should be commended for its interest in ensuring that affordable broadband services are available to all New Yorkers and that our State continues to lead the way in innovation and technological advances.

Respectfully submitted,

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