

**BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

Proceeding on Motion of the Commission to
Examine Issues Related to the Deployment of
Broadband over Power Line Technologies.

Case No. 06-M-0043

COMMENTS

of

**THE UNITED STATES DEPARTMENT OF DEFENSE AND
ALL OTHER FEDERAL EXECUTIVE AGENCIES**

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I. INTRODUCTION

The New York Public Service Commission (“Commission”) initiated this proceeding to address issues concerning the deployment of Broadband over Power Line (“BPL”) technologies through its Order issued and effective on January 25, 2006.¹ In its *Initiating Order*, the Commission invites comments and replies from interested parties on a wide range of issues concerning BPL systems and services.

The United States Department of Defense and All Other Federal Executive Agencies (“DOD/FEA”) is vitally interested in this case from its perspective as a consumer of telecommunications services. Indeed, the federal government is one of the largest end users of telecommunications services in New York because of the presence of numerous civilian offices and military facilities in the state. There are more than 100,000 employees of federal agencies spread among 62 counties in New York

¹ Order Initiating Proceeding and Inviting Comments, issued and effective January 25, 2006 (“*Initiating Order*”).

State. One of the 11 regional offices of the U.S. General Services Administration is located in New York City. Moreover, the United States Military Academy, Fort Drum, Watervliet Army Arsenal and dozens of other operational facilities of the Department of Defense and the Department of Homeland Security, are located in New York State.

To meet their numerous responsibilities, federal agencies obtain a broad spectrum of telecommunications services at both large and small service locations in urban and rural areas throughout New York. With a diverse presence, DOD/FEA is interested in the rates, terms and conditions for telecommunications services, as well as the quality of these services, and the Commission's oversight of the activities of all telecommunications providers under its jurisdiction. Moreover, DOD/FEA is interested in fostering robust competition for all telecommunications services in the state.

The *Initiating Order* states that consumers in New York benefit from a competitive marketplace that offers telecommunications service choices that are based upon differing technological platforms.² The Commission is addressing many developments concerning intermodal competition in Case No. 05-C-0616 ("*Competition III*"). Indeed, on August 15, 2005, DOD/FEA submitted Comments in that proceeding asking the Commission to take steps to increase the level of competition among firms providing innovative, high quality telecommunications services in New York.³

New York consumers can receive broadband signals through a variety of technologies.⁴ Telephone companies provide Digital Subscriber Line ("DSL") service using copper wire. Cable television companies offer modem service using fiber optic and coaxial copper cables. In addition, broadband services are available from cellular, Personal Communications Service ("PCS"), WiFi hotspot, and satellite providers. Every

² *Id.*, p. 2.

³ Case No. 05-C-0616, Comments of DOD/FEA, August 15, 2005, pp. 1-4.

⁴ *Initiating Order*, p. 1.

consumer does not have broadband access through each mode, but the Commission estimates that broadband services collectively reach 95 percent of the state's residents.⁵

The *Initiating Order* explains that an additional broadband platform could provide significant benefits to consumers, anticipating that this goal can be realized as BPL proves economically feasible.⁶ So far, there are two commercial BPL deployments in the U.S. Cinergy provides services in Cincinnati, Ohio, to approximately 50,000 customers, while the City of Manassas, Virginia, provides BPL to about 1,200 users. The *Initiating Order* also notes that there have been several trial deployments in New York state, including tests in parts of the Borough of Manhattan, as well as Briarcliff Manor, Penn Yan, and Solvay, New York.⁷

In the *Initiating Order*, the Commission explains that provision of broadband services to consumers through the energy distribution system raises a number frequently-asked questions regarding the appropriate role of regulatory surveillance.⁸ In addition, use of a technology bridging access to energy and telecommunications services raises a number of issues that have not been addressed previously by this Commission.⁹ From its perspective as an end user, DOD/FEA offers these Comments with conclusions and recommendations to aid the Commission in formulating the most appropriate response to these complex and interrelated issues that affect consumers throughout New York.

⁵ *Id.*, p. 2.

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*, pp. 2-3.

⁹ *Id.*, p. 3.

II. BPL CAN PROVIDE MORE COMPETITION AND ADDITIONAL BENEFITS FOR CONSUMERS.

DOD/FEA is interested in expanding the number of service providers because competition is the most efficient way to achieve lower prices and better services for consumers. DOD/FEA has a particularly strong interest in more suppliers because federal agencies procure services through contracts obtained through competitive bidding whenever possible. Competitive bidding is most effective if there are a number of qualified bidders. Also, from an economic perspective, a greater number of bidders should result in lower costs, and better terms and conditions.

From this perspective, DOD/FEA concurs with the Commission's expectations of expected benefits from BPL. Nationally, the broadband market is dominated by cable modem and DSL services. The most recent report on the status of competition by the Federal Communications Commission ("FCC") shows the following counts for Advanced Services Lines as of December 31, 2004:¹⁰

Technology	Advanced Services Lines	Percentage
Cable Modem	20,891,694	72.4 %
DSL	5,695,548	19.7 %
Other Wireline	1,468,566	5.1 %
Fiber and Power Line	695,253	2.4 %
Satellite and Wireless	106,616	0.4 %
Total	28,857,608	100.0 %

According to this FCC data, cable modem and DSL were together responsible for about 92 percent of all advanced services lines.

¹⁰ "High-Speed Services for Internet Access: Status as of December 31, 2004", Federal Communications Commission, Wireline Competition Bureau, July 2005, Table 2. "Advanced Services Lines" are defined as lines capable of transmitting at 200 kbps or greater speed in both directions.

The same FCC report shows that the great majority of the country is served by fewer than three providers of high-speed services.¹¹ Cable modem has more than three times as many advanced services lines as DSL, and the relatively light competition from DSL is dominated by the largest incumbent LECs. There is need for an additional facilities-based service to compete with the existing technologies.

Moreover, since BPL uses the existing electric infrastructure, this technology can be deployed expeditiously and economically in isolated communities, as well as in all types of suburban and urban markets. Where there is electrical power, there can be broadband access without the need for excavation or construction of additional aerial plant.

In December 2005, the United Power Line Council (“UPLC”), an alliance of utilities, technology firms, and service providers who are partners to develop BPL systems, petitioned the FCC to designate BPL as an information service.¹² This Petition presented encouraging results from commercial deployments of BPL to this point.¹³ For example, in Manassas, Virginia, the incumbent cable provider cut its price 55 percent after the city began offering BPL.¹⁴ Additionally, one-half of BPL customers served in Cincinnati, Ohio, switched from cable modem or DSL.¹⁵ These shifts necessarily put downward pressure on the charges for existing broadband access services. From its perspective as a consumer of broadband and other telecommunications services, DOD/FEA supports the additional potential for competition.

¹¹ *Id.*, Table 12 and Chart 10.

¹² FCC, WC Docket No. 06-10, UPLC Petition for Declaratory Ruling, December 23, 2005 (“UPLC Petition”).

¹³ UPLC Petition, p. 7.

¹⁴ *Id.*, citing *Broadband over Power Line (BPL) Could Hit \$415 Billion Revenue*, Communications Daily, February 25, 2005.

¹⁵ *Id.*, citing *Pipedream*, Telephony, June 6, 2005.

BPL offers advantages to consumers besides broadband telecom access. As UPLC explained to the FCC, BPL uses the electric distribution network as a communications medium so that the electric utilities themselves can use these capabilities to monitor and control their energy delivery systems and thus provide better service to their customers.¹⁶ Notably, BPL can detect faults on the electric network before they become outages, increasing the overall reliability of electric service.¹⁷ In addition, BPL provides two-way connectivity in real time, enabling advanced metering applications and remote management of the distribution grid. Moreover, utilities can employ BPL to provide video surveillance of electric substations.¹⁸ This feature enhances reliability, and is valuable as a measure for increased homeland security and public safety.

III. THE COMMISSION SHOULD ENSURE HIGH STANDARDS FOR RELIABILITY AND SAFETY IN IMPLEMENTING BPL.

The *Initiating Order* explains that the deployment of BPL technology creates a number of unique challenges related to the safety and reliability of electric service.¹⁹ Similarly, reliance of BPL on the electric distribution system raises communications reliability issues. DOD/FEA urges the Commission to ensure high standards for reliability and safety in implementing BPL.

High service quality and reliability are particularly important to DOD/FEA because continuously available and highly dependable telecommunications services are necessary for many civilian and military agencies to perform their missions and serve the public in critical situations. For example, in a proceeding concerning BPL at the FCC, the Federal Emergency Management Agency ("FEMA") reported that it owns,

¹⁶ UPLC Petition, p. 7.

¹⁷ *Id.*

¹⁸ *Id.*, pp. 7–8.

¹⁹ *Initiating Order*, p. 5.

operates, and maintains a radio system known as the FEMA National Radio System (“FNARS”).²⁰ This system provides command and control communications, and is used to communicate with disaster response elements at the federal, state and local levels.²¹

The National Telecommunications and Information Administration (“NTIA”) submitted detailed comments to the FCC in June 2004 discussing interference issues with carrier systems including BPL.²² In those comments, NTIA concurred with the FCC’s treatment of emission limits, and recommended that emission restrictions be employed in limited frequency bands and geographic areas.²³ Also, NTIA suggested implementation of coordination procedures to further reduce interference risks,²⁴ recommended certification by BPL operators rather than verification by manufacturers in order to align authorization obligations and benefits with the responsible party,²⁵ and suggested many additional steps to further reduce interference risks.²⁶

The FCC recognized the competitive potential of BPL, and has adopted policies to address issues concerning impacts on the reliability of telecommunications services. In a Report and Order issued in late 2004, the FCC prescribed rule changes to institute measures that mitigate radio interference caused by BPL.²⁷

The *Initiating Order* describes the need to protect against interference from line haul transmissions over power lines, as well as interference at a customer’s premises

²⁰ FCC ET Docket No. 03–104, Comments of the FEMA on BPL Implementation, December 16, 2003, p. 1.

²¹ *Id.*, p. 2.

²² FCC ET Docket No. 03–104, Comments of NTIA, June 4, 2004.

²³ *Id.*, pp. 5–7.

²⁴ *Id.*, pp. 8–13.

²⁵ *Id.*, pp. 14–15.

²⁶ *Id.*, pp. 15–24.

²⁷ FCC ET Docket Nos. 04–37 and 03–104, Report and Order FCC No. 04–245 (rel. October 28, 2004), para. 2.

resulting from service provided at that location or nearby places.²⁸ Interference can appear in many forms, including security systems and fire alarms, ETHERNET adapters, and other equipment associated with home and office wireless networks.²⁹

DOD/FEA concurs with the Commission's broad concerns regarding interference and safety issues. Federal agencies are situated in various types of locations, including large multi-tenant commercial buildings, sprawling Army, Navy and Air Force installations, individual offices, and many other types of facilities in urban and rural parts of New York. From DOD/FEA's perspective, BPL should operate on a noninterference basis relative to wired services in all environments. Thus, DOD/FEA urges the Commission to take any actions necessary to ensure that implementation of BPL fosters better communications and utility services — and does not impair telecommunications or electric services — in all types and sizes of government facilities.

IV. RULES SHOULD PERMIT VARIOUS ORGANIZATIONAL STRUCTURES, BUT PREVENT ACTIONS THAT COULD IMPEDE DEVELOPMENT OF FAIR COMPETITION.

The *Initiating Order* postulates that a variety of different business arrangements could be used to provide BPL-based services to the public in New York.³⁰ At one extreme, the regulated utility may invest and fully control the BPL assets, deploy the technology, and provide BPL services to the public.³¹ At the other extreme, the regulated utility may have no BPL involvement other than receiving compensation for

²⁸ *Initiating Order*, p. 6.

²⁹ FCC WC Docket No. 06-10, Comments of Panasonic Corporation, February 10, 2006, pp. 1-6.

³⁰ *Initiating Order*, p. 7.

³¹ *Id.*

granting the provider the right to access its poles and wires.³² The *Initiating Order* acknowledges that there are many types of organizational structures within this range.³³

The Commission tentatively concludes that a business structure with the least direct utility involvement is best suited to facilitate timely and economic deployment of BPL technology.³⁴ This tentative conclusion is apparently based on the belief that greater separation will reduce the level of regulatory surveillance necessary to prevent cross-subsidy.³⁵ DOD/FEA believes that this tentative conclusion may be unwise, or at least premature based on the evidence to this point. Electric utilities may be the best qualified to introduce BPL with minimum interference, maximum safety, and few operational difficulties.

The *Telecommunications Act of 1996* gave the Bell Operating Companies authority to conduct a wide range of competitive activities through structurally separate affiliates.³⁶ For example, the operating companies were permitted to engage in manufacturing activities, originate interLATA telecommunications services, and provide interLATA information services other than electronic publishing and alarm services.³⁷ This arrangement provided effective safeguards, as evidenced by the fact that with relatively little contention, requirements for these safeguards sunset under the terms originally contemplated.

From its consumer perspective, DOD/FEA believes that the Commission should place minimum constraints on the structure of the BPL operation. By permitting a

³² *Id.*

³³ *Id.*

³⁴ *Id.*, p. 8.

³⁵ *Id.*

³⁶ Public Law No. 104-104, 100 Stat. 56 (1996).

³⁷ *Id.*, Section 272 (a)(2).

variety of alternative organization structures, the Commission should be increasing the chances for successful deployment of BPL in New York.

While encouraging innovation, the Commission's rules should facilitate development of an orderly market, and forestall actions that could impede development of balanced competition. To ensure orderly implementation of BPL, utilities should be required to provide the Commission with at least 30 days notice of any financial arrangement or lease with a BPL company. Notification should include the name of the company, a description of the services to be provided, and the date when the new services or arrangements will begin.

Although flexibility is important, DOD/FEA urges the Commission to take any steps necessary to prevent cross-subsidies and other conditions that will harm consumers. As a basic step, the Commission should preclude regulated utilities from using ratepayer funds to research, develop or operate a BPL system unless those expenditures can be justified based on ratepayer benefits. Also, when a utility is installing a BPL system, costs related to the repair and maintenance of existing electrical equipment, including costs to maintain reliability of that equipment, should be allocated to electric operations, while costs related to the installation or operation of BPL should be allocated to that service.

In DOD/FEA's view, it seems likely that BPL might be provided most efficiently by affiliates of regulated energy utilities. The Commission should require that BPL services provided through affiliates be subject to the Commission's affiliate reporting requirements. Also, transactions between an electric utility and its BPL affiliate should be subject to a standard of fair market value, and the reporting utility should be required to identify the methodology that it used to calculate fair market value in each instance.

V. SURVEILLANCE IS NECESSARY TO ENSURE THAT ENERGY COMPANIES MAKE POLE ATTACHMENTS AVAILABLE TO COMMUNICATIONS FIRMS AT REASONABLE COST.

The *Initiating Order* states that a key element of BPL technology is its interface with the electric system's poles and wires.³⁸ In this regard, the *Initiating Order* poses a number of specific questions. Are current tariffs and pole attachment rates reasonable for BPL providers? Should BPL providers pay other fees to access and use various components of the electric utility system, and if so, how should such fees be developed?

From its perspective as an end user, DOD/FEA recommends that the Commission maintain close surveillance over pole attachment charges by electric utilities that are offering BPL either directly or through affiliates. Energy utilities wield a great deal of power through their monopoly control over pole lines in many places. When they provide broadband services, either directly or through an affiliate, the utilities are competing head-on with entities that require access to poles to provide their own communications services.

Control of pole lines has been addressed in a recent FCC proceeding concerning BPL. In its comments to the FCC, a wireless telecommunications provider asserted that the cross-competitive situation with BPL creates significant opportunities for abuse by energy utilities — opportunities that the wireless carrier contends some utilities are in fact exploiting despite provisions of the *Pole Attachment Act*.³⁹

In addition, cable associations of Alabama, California, Delaware, Florida, Georgia, Maryland, South Carolina, and the District of Columbia submitted joint comments in the same FCC proceeding concerning BPL. In their comments, the cable associations urged the FCC to ensure that provisions of the *Communications Act*

³⁸ *Initiating Order*, p. 12.

³⁹ FCC WC Docket No. 06-10, Comments of NextG Networks, Inc., February 10, 2006, p. 2.

granting cable operators and telecommunications carriers the right to attach their facilities to poles were fully upheld. The cable associations anticipated that power companies with interests in BPL might be motivated to exaggerate shortages of available space. Thus, the cable associations recommended that regulators consider requirements that operators be directed to make efforts to replace poles with taller or stronger ones able to carry more facilities, rearrange existing wires and other equipment to make more space available, and take other "make-ready steps" to accommodate prospective attachers whenever it is technically possible to do so.⁴⁰

In view of the issues that these parties have raised, DOD/FEA urges the Commission to maintain vigilance and ensure that efforts to foster more competition through BPL do not in fact eliminate any competitive opportunities.

⁴⁰ FCC WC Docket No. 06-10, Comments of the Joint Cable Operators, February 10, 2006, pp. 2-3.

VI. CONCLUSION

WHEREFORE, the premises considered, the U.S. Department of Defense and All Other Federal Executive Agencies urge the Commission to adopt the recommendations in these Comments.

Respectfully submitted,



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