

regulated and unregulated operations by electric and gas utilities or divestiture of unregulated assets are the most effective way of preventing self-dealing issues, the exercise of market power, and other potential abuses that may arise when competitive operations are affiliated with rate-regulated utility monopolies.”² With those principles in mind the Commission established tentative conclusions to guide the conduct of this proceeding as follows:

1. Economically viable BPL services will benefit New Yorkers through the provision of broadband services from a new facilities-based platform.
2. Electric utilities should not directly provide BPL services to the public. Rather, they should explore ways of granting unaffiliated BPL providers appropriate access to the electric system at market determined prices.³

NEM applauds the Commission for recognizing at the outset that BPL is a competitive product that should be offered in the marketplace by competitive providers. NEM submits that by infusing this basic assumption into its examination of BPL and the benefits it can yield for New York consumers the Commission has considerably advanced the debate. The public interest will best be served by ensuring non-discriminatory open access to the utilities’ electric infrastructure at just and reasonable rates for the provision of advanced powerline carrier technologies, including BPL. There should be no limit to the number of competitors on one line.⁴

The Commission identified major areas for comment, to be guided by its tentative conclusion that unaffiliated providers should render BPL services to New York

² Order at 3.

³ Order at 3.

⁴ See FCC ET Dockets Nos. 04-37 and 03-104, Broadband over Powerline Systems, Report and Order, adopted October 14, 2004, at para. 28, finding that, “We also see no need to limit ownership or control of BPL operations to electric utility operators. We believe that an independent BPL provider can take the same steps and precautions as an electric utility operator in working with its equipment vendor, the power system, and licensed radio users to ensure that an Access BPL system does not cause harmful interference and to resolve any interference.”

consumers. These issues include the status and development of BPL technology, safety and reliability issues, business model considerations, and appropriate regulatory framework. NEM's recommendations on the issues are set forth below.

1. STATUS AND DEVELOPMENT OF BPL TECHNOLOGY

With respect to the status and development of BPL technology the Commission clarified that it is seeking information on, “the technical characteristics of currently available and expected BPL systems as well as the capacity, performance, robustness, and security offered by these systems,” as well as, “the impacts the use of BPL technology may have on the operation of the power system and on the general public.”⁵

As an initial matter, it is important to note that current BPL/PLC technology is not radio frequency energy nor is it intentionally broadcast or transmitted by radio or as radio frequency energy. Unlike broadband transmitted by satellite, DSL wire or coaxial cable, current Access Broadband uses inductive couplers as single-phase micro-generators to produce encoded micro-voltages of electrical energy that represent information/content that is transmitted over electrical power lines in interstate commerce.

This “electrical information/content” is inductively coupled onto power lines for either wholesale or retail transmission into, through and/or from interstate commerce. Consequently, open, non-discriminatory access to power lines is vital to compete for market share in this important new market. It should also be noted that unlike “old” electricity, the new “electrical information/content” that is transmitted within the

⁵ Order at 4.

megawatts flowing through the power lines has, in most instances, already traveled into or through either interstate or foreign commerce.

Advanced BPL actually represents the convergence opportunity that was once envisioned, but never realized. Advanced BPL is, in essence, the convergence of the physics, the technology and the policies that have driven the restructuring of both industries, namely: (1) price competition, (2) technology-on-technology competition, (3) the encouragement of local telephone competition, as well as (4) the encouragement, indeed the windfall of an entirely new full-blown network infrastructure that is not only built and paid for, but the windfall from which could also result in lower prices for energy as well as the technology that is commingled with it.

Truly advanced BPL with transmission speeds in the multi-gigabyte range could facilitate an entirely new level of technology-based economic growth, significant increases in productivity and create disproportionately greater benefits for lower-income and rural consumers. If Advanced BPL is deployed with the bandwidth and speed that is currently technologically possible,⁶ this is precisely what Silicon Valley has been waiting for since the inception of the Internet itself. If the existing electricity infrastructure can become a large enough digital pipe into virtually every home in the United States, it could have significant implications for the technological advancement of numerous other industries as well.

⁶ See <http://www.hypertransport.org>; see also SN 10/487,717.

2. SAFETY AND RELIABILITY OF SERVICE

The Commission requested information as to “how the deployment of BPL technology affects the safety and reliability of the existing electric system.”⁷ NEM submits that BPL technology can significantly enhance the safety and reliability of the existing electric infrastructure to the benefit of utility systems and consumers. BPL technology can maximize the efficient utilization of existing infrastructure investments, potentially increase asset valuations and thereby lower the cost of capital needed for reliability upgrades. Additionally, the near-term improvements to power line surveillance, grid reliability, blackout prevention, isolation and mitigation as well as homeland security could be significant.

3. BUSINESS MODEL

NEM submits that in order to fully realize the range of technological advancements that BPL can enable, it is vital to require non-discriminatory open access to the utilities’ electric infrastructure at just and reasonable rates. As is true in restructuring other areas of utility operations, it is vital to protect a competitive market from the leverage of a utility’s control over regulated transmission and distribution facilities. The Commission has gone far to achieve that in its conclusions underlying this proceeding. The Commission reasoned that,

We believe that the most appropriate business model to deploy BPL-based services is one in which the incumbent electric utility is not the BPL provider, but rather leases or sells access rights for its system to business entities with the expertise, experience and resources to bring BPL service to the public. Given this belief, we establish a tentative conclusion that a business structure which includes the least level of direct electric utility

⁷ Order at 5.

involvement is best suited to facilitate the timely and economic deployment of BPL technology.

We reach this tentative conclusion about business structure based on a variety of considerations. First, we have consistently preferred the structural separation and/or divestiture of unregulated utility operations from the core utility business as the most effective means of avoiding cross subsidization issues that may not only result in overcharges to ratepayers, but also foster anticompetitive practices. Second, the level of regulatory oversight and resources required under an approach where the utility or its affiliate provides BPL service is significant. The amount of time, resources and costs incurred when addressing such regulatory issues could act as impediment for the timely deployment of the technology. Such a result is not in the best interests of New York State utility consumers. Finally, while many energy utilities have made investments in competitive affiliates, it is our impression that the majority of such investments have been marginally successful at best. Therefore, it is not clear that regulated electric utilities are best suited to address the challenges associated with rolling out a new communications technology. Combined, these considerations indicate that the public interest may be best served when incumbent electric utilities are not actively involved in the provision of BPL services to existing electric utility customers. The passive approach identified in our tentative conclusion is a more realistic business approach for electric utilities given our concerns noted above.⁸

NEM would recommend that the Commission consider the formulation and adoption of affiliate guidelines and codes of conduct to govern the relationship between the electric utilities and affiliated and unaffiliated BPL providers, as necessary depending on the Commission's ultimate decision in this proceeding. Chief among the principles that a code of conduct should include are: 1) subsidies of non-regulated activities by regulated entities should be prohibited; 2) regulated utility services must not be preferentially tied to products or services provided by non-regulated market participants (affiliated or nonaffiliated); 3) tariff and rate provisions should be applied in an equal, non-

⁸ Order at 8.

discriminatory manner to all market participants; and 4) a utility's operating employees and those of its unregulated affiliate shall function independently of each other.⁹

4. ELECTRIC UTILITY REGULATORY ISSUES

Because of the Commission's, "tentative conclusion that electric utilities should not be directly involved in the provision of BPL services to the public, but rather seek to lease or sell access rights to their power lines to BPL providers,"¹⁰ the Commission narrowed its focus on electric utility regulatory issues related to: "1. Use of existing electric utility personnel and resources to support BPL in any manner, 2. Incremental electric utility costs caused by BPL deployment, and 3. Cost of BPL access to the utility system."¹¹

Attendant to any discussion of utility costs of BPL technology deployment, there should be the recognition that BPL significantly increases the value of electricity. Utility revenues from advanced powerline carrier communications technologies could represent a sizable restructuring dividend. The dividend reinvestment options for electric utilities that open access to their system to BPL providers include all manner of infrastructure upgrades such as powerline surveillance to increase homeland security; powerline problem detection, prediction and prevention; enhanced power quality and grid reliability; and lower cost and more accurate upgraded metering.

Relatedly, BPL uses de minimis amounts of electricity, mere microvolts to perform work.

Accordingly, because so little does so much, a de minimis exception may be appropriate

⁹ For additional information see NEM's "Uniform Code of Conduct for Regulated and Unregulated Suppliers of Energy and Related Services and Technologies" available at: <http://www.energymarketers.com/Documents/FinalUCC.pdf>

¹⁰ Order at 11.

¹¹ Order at 11.

(not from non-discriminatory open access) from cost-based tariff provisions. It would be impractical to compute the infinitesimal amount of space that BPL uses of any given power line. This is because like all other electricity it uses every power line to some degree and is circulated throughout the grid at least sixty times per second. To require every utility to compute this infinitesimal fraction and then allocate some portion of its embedded or marginal costs to this fraction would still likely yield a mere fraction of a penny. Therefore, if the Commission wishes to promulgate a de minimis tariff for powerline access to transmit information in electrical format, NEM would strongly urge: a) that it be excluded from any cost-based ratemaking; and/or b) any tariff applicable be established at a token amount of one penny as acknowledgement that it uses a de minimis amount of existing transmission and distribution capacity.

5. CONCLUSION

NEM strongly supports this Commission's continued efforts to ensure that New York consumers realize the price, innovation and technology benefits, including BPL, that energy choice is meant to yield. NEM and its members are available to the Commission and its Staff to discuss these matters further as necessary.

Sincerely,

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