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**Federal Communications Commission
Office of the Secretary**

**Before the
Federal Communications Commission
Washington, DC 20554**

In the matter of)

Inquiry Regarding Carrier Current Systems,)
Including Broadband over Power Line) ET Docket No. 03-104
Systems)
)
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Reply Comments of the American Public Power Association

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Reply Comments

Introduction

These reply comments are submitted on behalf of the American Public Power Association (APPA). APPA is a national service organization that represents the interests of more than 2,000 publicly-owned, not-for-profit electric utilities located in all states except Hawaii. Currently, approximately three-fourths of APPA's members serve communities with less than 10,000 residents. At present, public power systems operated by municipalities, counties, authorities, states and public utility districts provide electricity to approximately 40 million Americans.

The last three years have witnessed a slowdown in investments by the communications industry. As private communications providers focus on establishing or further extending themselves in large population centers, many smaller communities are at risk of falling behind in

obtaining the full benefits of the Information Age. These benefits include vigorous economic development, educational and occupational opportunity, affordable health care and quality of life.

Furthermore, the economic downturn and the shakeout in the communications industry have significantly slowed or stopped private-sector deployment of broadband networks and advanced telecommunications, especially in rural areas. Numerous competitive local exchange carriers have either cut back on their plans to compete with incumbent telecommunications providers or have gone out of business altogether. This same misfortune has befallen many of the broadband overbuilders that had intended to build sophisticated new communications networks to compete simultaneously with providers of voice, video, data and other advanced communications services. According to the National Telephone Cooperative Association, small telephone companies have curtailed investments in broadband infrastructure in rural areas to such an extent that “few additional customers will gain access over the next few years.” Even the major incumbent providers of cable and telecommunications services have retreated from their promises to extend their services aggressively outside their traditional markets.

In this environment, it could well be many years before the existing communications companies are willing or able to offer rural and other underserved communities the same services at prices that are available in the lucrative sections of major population centers. Thus, many of APPA's members have concluded that they must rely on themselves if their communities are to continue to survive and thrive. They believe that advanced telecommunications are as basic to modern life as electricity, water and roads, and that they must develop their own facilities to ensure that their residents will not be left behind in obtaining the benefits of the Information Age.

Throughout the country, scores of public power systems are filling service gaps or providing extensive competition to incumbent communications providers, as Congress intended in enacting The Telecommunications Act of 1996. Public power systems, despite the substantial costs of installing new capital communications infrastructure, have been originating new voice, video, data and internet services, without the benefit of power line communications. If the legal, regulatory and technological advances discussed in this Notice of Inquiry occur, APPA members will be in the forefront of providing broadband over power line systems, especially in rural areas.

The American Public Power Association hereby submits its reply comments in response to the Commission's Notice of Inquiry ("NOI") in the above-captioned proceeding published in the *Federal Register* on May 23, 2003 (68 FR 28182).

Discussion

APPA's interest in this NOI is to advance the affordable deployment of broadband services in rural and underserved areas. Over the past few years there have been five major manufacturers developing systems for providing broadband over powerlines ("BPL") utilizing existing electricity wires. The trials they have performed have proven that the technology can work. And APPA is excited by the possibilities that these systems may permit its members to deliver broadband services over their existing infrastructure. But the trials have not yet demonstrated that there is a best system on technological, cost, performance or customer preference bases. Therefore, APPA believes now is not the time for Federal Communications Commission rules to provide advantages for one system over another. Flexible rulemaking will allow the marketplace to determine which of the broadband systems will prove to be the winning technologies.

APPA has been actively engaged in supporting the development of these technologies. APPA's research and development arm, the Demonstration of Energy-Efficient Developments (DEED) program has provided funding to the City of Manassas, Virginia to test the BPL system being developed by Main.net PowerLine Communications, Inc. APPA and the City of Manassas believe the trial has demonstrated the Main.net technology is a viable alternative to conventional broadband services platforms. During a recent discussion with one of the Manassas residents testing the Main.net system, the resident stated, "It provides the same connectivity speeds as their cable modem service."

APPA believes that BPL has some significant advantages over existing communications platforms for its members and their customer-owners.

1. BPL has the potential to be a less expensive communications technology for the monitoring and control of electric distribution systems. With the advent of more competitive and volatile electricity markets, and increased emphasis on cheap, reliable and constant power, APPA members have been employing equipment to remotely monitor and control their electric distribution systems. The monitoring and control equipment requires the installation of

systems that provide two-way communications. Some of these systems are expensive to install and maintain. BPL systems have the potential to reduce the costs of both installation and maintenance of communication systems. Examples of typical remote monitoring and control equipment include: a) capacitors banks to control voltage drops caused by customer equipment, b) voltage regulators to raise the voltage on long distribution lines; c) switches used to reroute circuits; d) power outage notification systems to help utilities pinpoint the areas experiencing power loss; e) power management systems to help reduce use during periods of peak electricity demands; f) automated meter reading systems to improve utilities' efficiencies; g) signal light communications systems to synchronize traffic lights; h) customer information systems for responding to time-of-day pricing; and i) other monitoring and controlling devices.

2. BPL has the potential to provide broadband connectivity to municipal facilities. Using existing broadband platforms one hundred ninety-seven APPA members already provide broadband connectivity to governmental facilities widely dispersed in their service areas. These networks link city hall and buildings serving fire and police departments, courts and correctional institutions, parks and recreation departments, and a variety of other departments, agencies and locations. Broadband technology improves data and voice networks, and reduces overall communications

expenses BPL systems will allow communities without broadband connectivity to develop their local networks with lower capital expenditures compared to traditional wired alternatives. For communities with existing broadband capacities or traditional communication systems, BPL provides a redundant communications network in the event of an outage or attack, enhancing public safety and Homeland Security.

3. BPL has the potential to provide broadband connectivity to hospitals, education facilities, and other non-profit agencies. Many of these non-profit institutions are dispersed throughout a community, and sited away from locations which are easily connected by traditional wired platforms. Moreover, because of their non-profit status, many of these institutions cannot afford the installation or maintenance costs for broadband services. BPL will provide a cost-effective means of connecting institutions that may have the greatest need and make the greatest use of high-speed communications technology.
4. BPL has the potential to provide broadband access to rural and underserved areas. Seventy-five percent of APPA members serve communities with populations of less than 10,000 residents. As a result of low population density, many do not have access to broadband and will likely not have new or upgraded communications facilities anytime in the near future from private, for-profit communications providers. On the other hand, there are already one hundred five communities that own

their own cable television systems, with seventy-one of them providing cable modem services. Very often the public power systems that create and operate these systems are encouraged by their consumer owners to initiate these services because private sector providers will not initiate service, provide poor service, or provide service at high cost. To most rural communities, if there is a private sector provider, it is a monopoly. For those consumers that do not have access to broadband, the availability of BPL may affect their ability to compete in this Information Age.

- 5 The development of BPL requires regulations that are flexible. The rules need to accommodate the differing BPL technologies that are being developed, the public and private utilities capable of providing service, and the size of the providers. As mentioned earlier, BPL technology is in its infancy. There are presently five manufacturers developing their own solutions. Until one or more systems develop dominance, it is prudent for the Commission to accommodate all of these systems, without creating standards that will preclude technological improvements. As it writes the rules, it is important for the Commission to consider the impact of the regulations on public power electric utilities. There are over 2000 publicly-owned electric utilities, representing sixteen percent of megawatt-hour electricity sales to ultimate customers, seventy-five percent of which serve communities with populations of less than 10,000 people. Rules which are complex; punish public ownership, operation and retail sales; or permit

the imposition of state legislative or regulatory barriers to entry by public power utilities; will make it difficult for BPL to serve large numbers of rural communities

6. The Commission should be careful in developing emission limits for BPL. In this regard APPA endorses the comments of the United Power Line Council (UPLC) and the Power Line Communications Association. UPLC reports that there has been no interference reported in many of the field-tests of BPL by its members. APPA is concerned that incumbent broadband providers and others will exaggerate potential interference problems as a means of convincing the Commission to limit the effectiveness and efficiency of BPL. Many of these entities seek to thwart a competitive technology, and deter established and well financed utilities with existing access to a significant customer base, that could endanger the incumbent broadband providers existing or possible future revenues. Given the tremendous potential of BPL to provide an advanced technology that utilizes additional facilities-based mechanisms for providing services, the burden should be imposed on challengers to BPL to demonstrate interference in a fact-based, empirical proof. Further, to the extent that interference is demonstrated, there should be an attempt to accommodate BPL, even if it means that existing communications providers may have to share or transfer bandwidth.

Summary

BPL is a technology that can permit public power electric utilities to provide facilities-based, broadband services to rural and underserved communities that presently do not have such service or are served only by a monopoly. Regulations must be flexible enough to accommodate this newly developed technology and the public power utilities that are in the position to employ it.

Respectfully submitted,

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