BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON D.C. 20554

In the Matter of:	)	
	)	
Inquiry Regarding Carrier Current Systems,	)	ET Docket No. 03-104
Including Broadband over Power Line Systems	)	
	)	

REPLY COMMENTS OF THE MICHIGAN PUBLIC SERVICE COMMISSION

I. Introduction

The Federal Communications Commission (FCC) initiated a Notice of Inquiry (NOI) regarding carrier current systems and, more specifically, Broadband over Power Line (BPL) systems[1]. The Michigan Public Service Commission (MPSC) is concerned about the viability of this technology, including implications which arise, if this technology is used to provide basic local exchange service. The MPSC presents the following reply comments to the NOI.

II. The Notice of Inquiry

On April 28, 2003, the FCC released a NOI requesting comments and reply comments on primarily technical issues regarding BPL. The FCC sought information and data on the relevant technology. In addition, the FCC sought comment on whether it should change the Part 15 rules, 47 CFR § 15, to allow for the legal and feasible deployment of BPL.

[1] ET 03-104, Notice of Inquiry Regarding Carrier Current Systems, including Broadband over Power Line Systems, April 28, 2003.

The NOI distinguished between "In-House BPL", where the BPL systems operate inside a building, and "Access BPL", where the service operates over utility poles and medium voltage electric power lines. The former is readily available for home and intra-office networking . However, the latter is apparently in the process of being developed on a larger scale.

III. Discussion

The majority of the comments received in this docket expressed concern about radio frequency emissions. It appears that power companies are having problems solving existing radio frequency emissions[2]. This is due, in part, to the reductions in personnel resulting from "mergers and consolidations in the interest of reducing the cost of system operations"[3] and the lack of knowledge and experience with this specific technology.

The Amherst Alliance, a nationwide advocacy group which supports Low Power FM Radio Service, stated "the generation of signal interference by BPL is an established scientific fact. This interference will erode, and in some places even eliminate, the viability of important established uses on various radio frequencies"[4]. According to several commenters, BPL could interfere with:

- Radio astronomy[5].
- Short wave foreign broadcast stations.
- Amateur Radio Services.

[2] "The Power Companies already have an extremely poor track record with respect to FFC Part 15 radiation limitations", ET 03-104, comment by Mike Rauchle at 1. "It is a known fact in the Amateur community that power companies have a poor track record of responding to legitimate interference complaints by Amateurs, and BPL has the potential to greatly magnify this problem", ET 03-104, comment by Leonard E. Kay, PhD, PE, filed July 7th, 2003, pg. 3.
[3] ET 03-104, comments by W. Lee McVey, P.E., filed June 24th, 2003, pg. 4.
[4] ET 03-104, comments by The Amherst Alliance, filed May 23rd, 2003, pg. 2.
[5] See ET 03-104, comments by The National Academy of Sciences' Committee on Radio Frequencies, filed July 7th, 2003, pg.2.

- Disaster Communication Networks
- Land, fixed, mobile services.
- Military Affiliate Radio Systems (Army, Navy, Marine Corps, Air Force).
- Citizens Band (Class D).

In addition, some commenters contend that the power line companies offering BPL, whether it's "In-House BPL" or "Access BPL", should protect their equipment against frequency interference from other devices that legally use the same spectrum.

If these claims are in fact true, the MPSC agrees with the FCC proposal to set minimum standards of quality, by certifying BPL equipment, to assure that BPL will not interfere with other services in the same spectrum. PPL Telcom, LLC (PPL Telcom), a subsidiary of PPL Corporation that provides broadband fiber-optic services for high-speed data transmission between carriers, claims that "BPL does not pose significant risks for unintended high frequency radiations that will impair the operation of consumer devices, amateur radio communications, or other forms of commercial communications…"[6]. However, PPL Telcom states that they have performed only a "technical test" in Emmaus, Pennsylvania, with "eight employee-volunteers as trial participants". The MPSC believes that the conclusions drawn from such a small experiment may be biased. Consequently, the MPSC agrees that "assurance can come only through extensive *field testing by independent parties – not from the telecom and power industries."*[7]

Companies such as Verizon Communications, Inc. (Verizon) and Qwest Communications International, Inc. (Qwest) have raised concerns about safety, technical

[6] ET 03-104, comments by PPL Telecom, LLC, filed July 7th, 2003, pg. 5.
[7] ET 03-104, comments by Leonard E. Kay, filed July 7th, 2003, pg. 1.

issues and the regulatory framework of the BPL. Qwest believes the FCC "must require prospective BPL providers to demonstrate that this interconnection will not endanger ILEC services, facilities, or technicians. The Commission should also require a complete physical separation of the BPL service from its underlying transmission facilities before handing off the signal to an ILEC[8], or to the inside telephone wiring at a customer's premises."[9] The MPSC believes the Verizon/Qwest proposal to be a reasonable means to help minimize the incidence of any accidents associated with the introduction of this innovative technology.

A technical issue raised by Qwest and Verizon involved the testing of BPL equipment. Verizon contends the FCC should require "industry standards or technical requirements"[10]. Qwest insists on a review and comment period of the testing results before setting any industry standards. The MPSC supports this measure and reiterates the need to have an independent entity perform the technological field work in order to help ensure the accuracy of any testing.

As to the regulatory framework of BPL, Qwest and Verizon agree that all broadband providers should be treated equally. However, Qwest is concerned that if the BPL providers are treated only as competitive local exchange carriers (CLECs), the BPL providers would not have an obligation to make pole attachments available to ILECs.

The MPSC believes that the BPL providers should not be classified as CLECs as long as they or their affiliates do not offer basic local exchange service. They should be treated as any other broadband provider. However, should they provide basic local exchange service, the BPL companies should be classified as CLECs and be required to

[8] ILEC stands for Incumbent Local Exchange Carrier (MPSC note).
[9] ET 03-104, comments by Qwest Communications International, Inc., filed July 7th, 2003, pg. 4.
[10] ET 03-104, comments by Verizon Communications, Inc., filed July 7th, 2003, pg. 6.

comply with the Michigan Telecommunications Act, MCL 484.2101 *et seq,* which would include the availability of pole attachments at reasonable rates, terms and conditions.

In addition, there is a concern that electric ratepayers may end up funding the broadband network. The MPSC agrees with REC Networks, a California based internet radio station operator and representative of independently owned Low Power FM broadcast stations, when it stated that "the state public utility commissions need to step up to the plate to assure that the average consumer who does not use the service will not be stuck paying for these network "upgrades""[11]. The state commissions should deal with these potential circumstances since they have ample authority over both industries (electric and telecommunications), and thus are better qualified to act in creating, removing or implementing any requirements. In Michigan, facilities-based broadband providers are governed by Public Act 48, MCL 484.3101 *et seq*, (*The Metropolitan Extension Telecommunications Rights-of-Way Oversight Act)*. The service provided by BPL providers would fall under this act. In addition, Public Act 49, MCL 484.3201 *et seq*, *The Michigan Broadband Development Authority Act*, created an authority to issue bonds and notes to provide for financing to broadband developers. The BPL providers could take advantage of these incentives. In summary, the MPSC believes every state has unique circumstances and that state commissions are in the best position to protect the interests of its citizens.

IV. Conclusion

While the MPSC agrees with the FCC that BPL providers could potentially "provide consumers with a ubiquitous third broadband pipe to the home"[12], nevertheless the MPSC believes that it is important to ensure that there is no interference with already well established services in the deployment of a different technology.

Michigan encourages and welcomes innovation in a responsible manner. In fact, in an analysis of the assessment of state policies impacting broadband deployment and demand conducted by Technology Network, "Michigan leads the list of states that have enacted policies to accelerate broadband deployment and spur demand for broadband applications and services, by virtue of a comprehensive strategy to bring the benefits of broadband to all its citizens through policies that clear deployment roadblocks, promote supply and spur demand."[13] BPL systems can, with appropriate safeguards, further the goals established in Michigan and other states.

Respectfully submitted,

MICHIGAN PUBLIC SERVICE COMMISSION

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[11] ET 03-104, comments by REC Networks, filed July 7th, 2003, pg. 4.
[12] ET 03-104, Notice of Inquiry Regarding Carrier Current Systems, including Broadband over Power Line Systems, April 28, 2003, pg. 17.
[13] "The State Broadband Index", Technology Network, July 2003, pg. 5.

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