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To: Federal Communications Commission
Commissioners Abernathy, Adelstein, Copps, Martin, and Powell
Washington, D.C.
Regarding Docket # 03-104

I am writing to you today to express grave concerns about the Broadband over Power Lines technology. My points are both technical and non-technical and my hope is to illustrate to you that the commercial interests in the technology may be ill fated in the open market and that the technology's promise and profitability may be negated by the costs associated with support and resolving harmful interference to licensed radio services. Further, I hope to also illustrate technically that the technology WILL unquestionably cause interference and could conceivably endanger life and property in emergencies.

Point 1: BPL technology involves the transmission of RF signals at varying frequencies up to 80 MHz (plus unintentional harmonics) on an inappropriate transmission medium intended to carry electricity – specifically alternating current @ 50 or 60Hz. As you already know RF “leakage” on an unmatched, un-tuned transmission line almost always leads to interference. Even if it could be tuned to a “center frequency” using artificial means, no amount of tuning will make this a “broad-banded” medium. Simply put, it was never designed to guard against interference caused by transmitting a huge range of frequencies over it.

Point 2: Power utility companies are having a difficult time keeping pace with technology just managing their core businesses. I don't think that their customers would appreciate their power bills being increased because of the high costs associated with providing implementation and technical support services to broadband users. Even if these support services were spun off to other private companies who could do it cheaper, the utility companies would still have to provide support to them; even if it only involved the time required to answer questions about certain circuits or infrastructure. The power companies are necessarily going to view these Internet services as far less critical than providing electricity. The power industry is already under enormous pressure from the government and watchdog organizations to upgrade infrastructure and implement safeguards against the causes of calamities such as last year's August blackout in the Northeast, Midwest, and Canada. Ultimately, this may not make financial sense to most of them.

Point 3: The target market of this technology seems to be demand from “last-mile” customers in undeveloped rural areas – a tiny market to say the least. The offering would

have to be cheap. These markets can be effectively and economically served by existing technologies, such as wireless LAN's and satellite offerings that are not fraught with the inherent safety hazards and interference issues of BPL.

Point 4: Most consumers already have access to broadband service via DSL, Wireless LAN's, cable and satellite services. With all of this, it's no wonder consumers are not calling for more choices. BPL is also slower than existing technologies. Also, as the costs of fiber-optic cable is continuing to fall, it may not be much longer before fiber can be run right to the home and will connect users at 20 times the speed of the fastest DSL or cable connections could.

Point 5: BPL is also a latecomer to this market. In order for such a technology to succeed in the open market, it must demonstrate a clear superiority. It cannot demonstrate ANY superiority or improvement in service over any of its competition. Other than price, (and there is no promise yet of low prices for BPL service) there is not a single reason a consumer would choose BPL if a competing service is available.

Point 6: Safety! Commercial, private, public safety, public transportation, aviation, amateur radio, EMS, homeland security, marine, intelligence community, civil defense and government agencies use both fixed and land mobile radio to communicate voice and data information, the timely transmission of which may be critical to the preservation of life, and property. Even if interference to fixed stations could be notched locally, there is no practical way to insulate licensed land mobile radio services from BPL interference due to the fact that each service uses a different piece of the spectrum. Such interference could even have national security implications given the threats that exist in today's climate.

Also, imagine if you will, the consequences of an end-user trying to service the BPL equipment themselves! Surely, this, in addition to the previous points discussed, would negate any small merit this technology may have. The only merit at all that I can suggest that BPL has is that no new transmission line has to be installed. Does the commission really believe that this is enough?

Please accept my thanks for considering my remarks.

Chris Etheridge
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