To: Federal Communications Commission
Washington, DC

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On the Matter of Notice of Inquiry 03-104 (Broadband Over Power-Line)

As an active amateur radio operator and practicing Electrical Engineer in the Telecommunications field of more than 25 years experience, I find it difficult to understand the Commission's position , in considering allowing increased emissions for Broadband over Power-Line . This "technology" makes use of power lines which can and do radiate harmful interference while attempting to reach subscribers. The power levels required to perform adequate BPL data rates have been proven to cause harmful interference, in several countries where BPL was field trialed, even on a small-scale. On a larger scale there is no doubt to the undersigned that harmful interference would occur to these and other services to the point of rendering them non-functional:

Marine Radio
Short-Wave Broadcast
Aeronautical Short-wave
Amateur Radio
Government Services (Fixed and Mobile)
Public Service Band (30-50 MHz) i.e. Police, Fire and First-Aid.
Television Broadcast (54-80 MHz)
Paging and Radio Control (72-76 MHz)

There are many other services, not listed, that would suffer from the harmful interference as well. The assumptions made by the BPL industry proponents are completely in error, assuming that the same 'balanced" wire transmission line that serves them well at power-line frequencies could properly conduct RF energy up to 80 MHz much the same way coaxial cable works for the cable television industry- but this is totally incorrect. As frequency increases, the radiation from the "balanced" line increases to the point where a very high percentage of the BPL energy injected at either end of the path is radiated and can become harmful radiation to these services. In normal installations, a line could be open on one side (as in a light switch circuit) and the system is completely unbalanced, resulting in still greater interference. The BPL proponents offer no remedy to this situation.

My involvement with the Amateur Radio Service over the last 33 years has been always a very positive experience. Several notable occasions ,during emergencies, Amateur frequencies in the proposed BPL range were needed at a moment's notice. In total, there where several hurricanes, one tornado and an earthquake requiring the use of frequencies in the proposed band. Permitting increased BPL emission power would then seem a large step backwards for Homeland Security. This is especially true since the proposed 1.7-80 MHz range does yield greater communication ranges at several hundred to thousands of miles, without any dependence on a fragile telecommunication infrastructure, such as one needs at UHF and Microwave. A BPL system, operated by a utility would not be cooperative in shutting down such a system during emergencies, as witness the power-line interference issues we have seen recently.

The broadband service that BPL attempts to provide, is better served by those technologies that either deliver it by a true closed-circuit, such as broadband cable, or by licenced methods, such as satellite.

In conclusion, I believe that the proposal to allow the increase of BPL RF emission levels to be totally detrimental to the many services now utilizing the 1.7-80 MHz frequencies, and would be an overall negative contribution to our country.

Michael J. Masterson
22 June 2003