

To the FCC, with regards to the recent NPRM, Docket 04-37:

In light of the NTIA's recently published results of its Phase I study, I would like to comment further on the issue of BPL deployment in this country. Please note the following points:

1. Part 15 guidelines should not be weakened to any extent with regards to field strength intensity for unintentional emitters. Per NTIA, Part 15 appears to be inadequate, as the signals received often exceeded the limits set forth. Of particular interest is that a strong component appears to be radiated above the local horizon. Well established and mature BPL installations will inevitably be propagated great distances via ionospheric reflection and wreak havoc by raising the noise floor many decibels. Part 15 needs to be strengthened, not weakened.
2. Proponents of BPL continue to claim that the technology does no harm to local radio reception. This is simply not true. Trial installations in Manassas, Virginia and Raleigh, North Carolina are causing interference, and many complaints are being voiced. Mitigation efforts in North Carolina by Progress Energy Corporation (PEC) have not been successful, and the utility appears to be reluctant to invest further energies to eliminate harmful interference in the HF bands. It is interesting to note that PEC is using "frequency notching" in an attempt to fix the interference problems. Frequency notching was one of the mitigation efforts listed in the NTIA report. There has been a long history of interference problems to radio communications from power providers related to faulty connections and such. Corrective measures are often slow in coming, with only warnings from the FCC provoking positive action from the respective utilities. Power utilities should upgrade their infrastructure and concentrate on delivering power to the consumer, and not BPL, which is outside their expertise. Perhaps the most disturbing aspect is the potential for massive loss of life due to interference with aviation communications. The NTIA Phase I study indicated that a mature BPL installation will interfere with aviation radio traffic to great distances and altitudes. Rectification, impedance bumps, and other power line discontinuities will inevitably cause interference well up into the VHF band as well.
3. Radio communications services should not be expected to bear any responsibility for disruption of BPL communications, nor should they be expected to alter operating parameters in any way. By very definition, Part 15 devices/systems must ACCEPT any interference they receive, and not impact communications by duly licensed services. The potential BPL customer must be informed of this fact prior to signing a service contract with the provider. By very nature, any system that leaks RF will also allow it to intrude. Even relatively low power transmitters have the capability to interrupt a BPL system.
5. Frequency bands well above the proposed 2-80 MHz operating range are available for use by BPL. This swath of spectrum has too many users who will be

impacted by persistent, severe interference. BPL technology is available that operates above 2 GHz, and will cause few problems as this upper frequency range is primarily characterized by line of sight propagation, and will not cause problems thousands of miles away. In my opinion, the 2-80 MHz range needs to be abandoned, as its use is fraught with problems, and is already obsolete.

6. The experience of other sovereign nations that have experimented with BPL is not positive. Austria and Japan, for example have not allowed its full scale use, due to the havoc that BPL wreaked on local radio communications. Austria had a bad experience when a Red Cross exercise could not be conducted due to the BPL signals overwhelming radio communications by exceeding noise limits by a factor of 10,000.

The Commission is undoubtedly aware of the above-mentioned points. I also strongly urge that the Commission extend its deadline for comments so that the results from the NTIA's Phase 2 study can be considered as well. Pushing ahead on this issue before this report is delivered is not prudent, in my opinion. I trust the Commission will act thoughtfully and consider the preponderance of evidence that indicates that this form of BPL technology will not be worth the problems it creates to vital radio communications.

Respectfully yours,

Philip Neidlinger, PE, CTS  
Professional Engineer  
Certified Technology Specialist, International Communications Industries Association  
Amateur Extra Licensee KA4KOE