

Amateur Radio Station, KO4WX
Michael C Boatright
1013 Latham Road
Decatur, GA 30033

These comments are made with regards to Proceeding 03-104, notice of inquiry to obtain information on a variety of issues related to Broadband over Power Line (BPL) systems.

My interest in this proceeding is that of an amateur radio operator, license KO4WX, as an emergency communications volunteer using amateur radio and as an Internet professional, with a vested professional interest in high-speed data communications to the home consumer.

After careful review of the technical issues surrounding Broadband over Power Line, I cannot in good faith see the value to the nation as a whole, or to individual communities who may be served by BPL, versus the cost to the nation in terms of lost spectrum and the downstream effects that this will cost.

As a member of the American Radio Relay League (ARRL), I serve as the Section Emergency Coordinator for the State of Georgia. Our served public agencies and volunteer organizations in this state include the Georgia Emergency Management Agency, the American Red Cross, the National Weather Service, the Georgia Baptists Disaster Relief organization, the Salvation Army, and numerous county emergency management agencies throughout the state. We are included within the State of Georgia Emergency Operations Plan under ESF #2 (Communications) and are a member of the Volunteer Organizations Assisting in Disasters (VOAD).

Our responsibility in Georgia is to provide emergency communications support whenever normal channels of communications are interrupted or degraded. Our statewide operations plan is available at:

<http://www.gaares.org/ARESPlan/GASectionARESEmergencyResponsePlan.pdf>

Within this plan, we identify the threats and potential needs which would necessitate a statewide emergency communications response. These threats include hurricane (and evacuation in advance of a threatening hurricane), flood, widespread ice storm, and long distance communications paths between National Weather Service offices, including the National Hurricane Center in Miami, Florida.

To coordinate statewide activations, and as a primary communications path between affected areas in the state and the GEMA headquarters in Atlanta, we rely very heavily upon HF communications, particularly in the 75-meter (3.9MHz), 40-meter (7.2MHz) and 20-meter (14.3MHz) voice bands.

Based on the results of testing in other countries, in the US, and direct observation from very qualified ARRL Laboratory personnel, and based on my own qualifications as a Technical Specialist for the ARRL, I am certain, beyond any possibility of doubt, that should BPL be implemented in the State of Georgia, it will seriously degrade, if not render completely unavailable our primary communications paths in the HF bands. This will make it nearly impossible for our operators to establish long distance paths between affected areas and served agencies.

The need for long distance paths is particularly necessary in Georgia, which is the largest state east of the Mississippi River. Georgia has significant population centers on the Atlantic Coast and very near the Gulf Coast. Since 1990, only 4 of the 159 counties in our state have gone without the necessity of a declared Presidential state of emergency. Our emergency communications infrastructure has served many of these and many more which impacted the safety and property of members of the public.

Amateur Radio is not just a hobby—it utilizes public radio spectrum to serve the public when other means of communications are no longer available. Despite continued advances in communications technology, again and again, the need for backup means of establishing reliable communications continues to this day.

Remember that amateur radio operators prepare themselves for emergencies by implementing emergency power capabilities, which often require them to operate at significantly lower power levels, than when operating from commercial mains. Often the station in the affected area of a disaster is being received by others at signal levels very closely approaching the noise floor. Any raising of the noise floor, or interfering signals, even those as much 60 or 70 dB above the noise level will severely impact emergency communications, and put the lives, safety and property of the public at potential risk.

While the concept of BPL is an intriguing one, due to the ubiquity of electric utility service to the home, it is flawed due to the fact that power transmission lines to homes must, by necessity, be lengthy, and the length of these wires makes them perfect radiators at HF. Recent direct observations by the ARRL Laboratory of communities where trials of BPL were being performed shows irrefutable evidence that even the Part 15 power level HF signals used in BPL can be propagated at very long distances and directly interfere with incumbent HF radio services.

In my home in Decatur, Georgia, I have had DSL service for approximately 2.5 years. Even though my home is 16,500 feet from the ILEC's central office, I am very satisfied with my DSL service, which averages around 1Mbps or better downstream and 200Kbps-256Kbps upstream. I also have the option of cable modem service and high-speed satellite service from DirectTV, and WiFi (802.11b) service is prevalent in my area.

In the 2.5 years that I have had the DSL service, I have never encountered a situation where DSL interferes with amateur radio communications and vice versa. In that period of time, I have had nearly 1000 amateur radio contacts at output power levels at or significantly below 5 Watts.

From my personal experiences, it is clear to me that it is quite possible and feasible to provide high-speed/broadband Internet access without interfering with incumbent radio services. These services are becoming ubiquitous and available to even the most remote of communities.

Given that competing services to BPL exist, and that BPL threatens to negatively impact significant public services by interfering with incumbent radio services, particularly those serving in the public interest, I cannot come to no other conclusion than that BPL, while on the surface attractive, does not serve the public interest, and that further certification of BPL devices and/or technologies be denied by the Commission, and that immediate cessation of existing trials cease at risk of negatively impacting the public any further.

Sincerely,

Michael C Boatright, KO4WX
Georgia Section Emergency Coordinator, American Radio Relay League