Position Statement:

This comment is filed in OPPOSITION to comments provided by the UPLC and PLCA and IN SUPPORT of those filed by the ARRL.

Summary:

If BPL is the panacea for rural broadband development why is BPL range limited to less than a mile? The best way to achieve broadband to the home or business is fiber. Fiber already co-exists with many medium and high voltage transmission lines. With the prices plummeting on Fiber to the Home (FTTH) and Fiber to the Premises (FTTP) products it would seem that a "glass" solution all the way would be best from an economic and safety standpoint. A Wi-Fi connection from a fiber trunk running along a medium voltage line would be a good second choice to link the home or business to the Internet without safety or interference concerns.

Technical Concerns:

Part 15-

Old cable modems that were in compliance with FCC part 15 raised havoc with HF operations even when used within a shielded system. A signal with a field strength of 30 uV/M at a distance of 30 meters is quite strong. An entity wishing to receive a radio signal from a different location on the same frequency or band at the same location or within 30 M of the part 15 radiator's location would find the signal hard to receive if it were possible at all. On a discrete frequency such radiators can be tracked down or worked around. However, when such a signal occupies a wide swath of bandwidth, a frequency work around is improbable. Since BPL will use the AC feeders with in a home or power grid, and because these feeders are unshielded and unbalanced, the probability of wide spread spectrum contamination due to inadvertent radiation is very high. This is why the Governments of Japan and Germany have decided not to allow BPL within their respective jurisdictions.

AC Transmission Lines:

AC Distribution Feeders, or all transmission lines for that matter, are nothing more than low pass filters. They were designed to efficiently transmit 50 - 60 Hz electrical power and nothing more. If BPL is placed on these same feeders, these feeders would become antennas and then become a become a source of interference for all users of the short wave radio spectrum such as the government sector (military, homeland security and some state governments), transportation sector (aeronautical and maritime), Broadcasters along with their listeners, and amateur radio operators. There is also a good probability that signals radiated by these licensed users could very well degrade BPL signals. Reports from Austria suggest an effective radiated power of 5 watts is sufficient to shut a system down.

Another problem is the transients that occur when individual induction motor driven appliances or tools are started and stopped. These transients are babies when compared to switching transients that occur when generators, lines or large loads are taken in and out of service by the utilities. As these transients travel down the power lines, each joint or device in the line tends to cause a reflection that would tend to degrade or completely destroy the BPL signal.

Existing Technologies:

As broadband service is currently being provided everywhere by telephone, cable , wireless and/or satellite companies; without sacrificing the short-wave radio spectrum, it seems silly if not totally outrageous to allow those lobbying for BPL to become the largest polluters of the short wave radio spectrum. Further, anyone who has a telephone or cable TV service could have broadband service. It just takes some governmental "inducements".