

I am an amateur radio operator, AC5WO, that has experienced electric power line interference problems and therefore remain skeptical about the ability of electric utilities to correct interference to licensed radio services. When I was looking for a home to purchase 10 years ago I rejected many properties due to high levels of radio interference from nearby overhead power lines. Power line noise is incredibly frustrating to deal with because the RF energy can propagate thousands of feet from the source down the power lines. In addition, most of the technicians that work on high voltage power lines have zero knowledge of RF. When I experienced a power line noise problem at my parents farm, I had to walk up and down the road with a sledge hammer, beating on utility poles until I found the one where the RF noise changed with vibration and then make many phone calls to the electric utility to get them to fix the problem I located. To prevent similar frustration, I purchased a home in a neighborhood that was both old enough to not have CC&Rs against outdoor antennas but new enough to have underground utilities.

The NPRM states "...We therefore would expect that, in practice, many amateurs already orient their antennas to minimize reception of emissions from nearby electric power lines." This is incorrect, especially for the 1.8-2.0 MHz and 3.5-4.0 MHz amateur radio bands where antennas are physically large compared to a typical suburban lot. Amateur radio antennas are typically installed so they both comply with local zoning requirements and physically fit on the property. There usually isn't much flexibility in antenna placement and orientation to minimize reception of emissions from power lines. It is very common for local zoning to prohibit locating amateur radio antennas in the front yard, for example.

I believe that regulation of cable television systems sets a precedent for Access BPL technical requirements and regular testing beyond the Section 15.209 unintentional radiator requirement. Specifically, Section 76.611 requires testing of signal leakage in the aeronautical radio bands every 12 months and Section 75.612 requires 12.5kHz offset of video carriers in the aeronautical bands to avoid aeronautical frequencies. Because Access BPL systems are subject to similar outdoor environmental conditions that can cause interference problems to appear years after installation, retesting of Access BPL emissions every 12 months seems appropriate. Why should Access BPL and cable television systems installed on the same utility poles be subject to very different technical requirements? In addition, avoiding the use of amateur radio frequencies to prevent interference instead of correcting interference after it occurs is also consistent with the spirit of existing Part 76 regulations and current practice with the HomePlug In-Home BPL standard.

The NPRM states "The HomePlug Powerline Alliance (HomePlug) states that it's member companies have widely deployed In-Home BPL equipment in the consumer market over the last 2 years and there have not been complaints of interference." This statement is misleading in that the HomePlug standard attenuates signals in the HF amateur radio bands by 30dB. I would argue that interference problems between early pre-HomePlug In-House BPL and amateur radio stations that was solved by notching out the HF amateur radio bands in the HomePlug standard suggests a similar solution for Access BPL. If the radiated emissions limit for Access BPL was 30dB below the radiated emissions limits of Section 15.209 in the HF amateur radio bands, maybe Access BPL could avoid interference complaints too.

The NPRM states "...hundreds of kinds of unlicensed devices are successfully operating under the current Part 15 limits without causing harmful interference to licensed operations." This statement is misleading. I frequently have to

modify Part 15 compliant electrical and electronic equipment to prevent it from causing interference to my Amateur Radio station. Additional filtering on all wires leaving the device that is the source of interference usually solves the problem. Because I have ownership of both the equipment that is the source of the interference and the equipment that is receiving the interference, I can resolve these problems without contacting the FCC.

In addition to my experience as amateur radio operator AC5WO, I am also Sr. RF Design Engineer for the Broadband Wireless Access equipment manufacturer Navini Networks. Navini Networks faces competition from other equipment vendors, but the number one challenge is making our equipment cost low enough to make our customer's business case work. The challenge is to make the line cost, the total cost per customer including hardware and installation, low enough for the service provider to make a profit within a reasonable period of time. I'm puzzled how Access BPL magically solves this fundamental challenge of broadband deployment that frustrates cable, DSL, and wireless solutions. Installation of equipment on high voltage power lines can't be cheaper than installation of similar DSL equipment on phone lines, for example. I fear that the business case for Access BPL only works by directly or indirectly shifting the cost of hardware and installation onto the bills for all customers of the electric utility.