

Proceeding 03-104

Reply Comment:

In response to the comment filed by PowerWAN, Inc. on July 7, 2003.

On page 3 of PowerWAN's comment:

*PowerWAN, Inc. believes that BPL Access should be treated as a service that provides better usage of existing power company assets to provide data access and other value-added services to customers who would otherwise not be able to obtain these. As such, less regulation, including an upward adjustment of Emission rules for carrier current systems to 100 uV/M at 30 meters, will facilitate lowering the cost of Access BPL to lessening the need for repeaters to provide broadband in urban and especially, rural areas...*

While it is true that power company infrastructure would be utilized for a new and admittedly needed market, BPL would displace significant infrastructure already in place to facilitate emergency management communications, military communications, commercial broadcasts, and the amateur radio services. In essence, BPL would provide greater service at the expense of rendering existing communications methods and infrastructure completely useless. Further arguing that the Emissions rules should be relaxed to 100 uV/M at 30 meters is beyond comprehension. PowerWAN completely fails to demonstrate a need for the rules change and further fails to demonstrate how the change will effect other protected users of the spectrum.

On page 4 of PowerWAN's comment:

*To date, Access and In-House BPL has not been shown to be detrimental to radio services. As is seen in many other bands, radio services are migrating to digital technology with forward error correction, with strong benefits to users including higher capacity. As cellphone users know, digital technology produces clearer and higher quality calls. The side benefit is that the available spectrum is better utilized on an information density basis due to higher order modulations that can be used. As the bands from 2-50 MHz are used more by digital technologies such as BPL, better utilization of these important frequencies will result. The radio services in this band will also benefit users by going from analog to digital technologies with modern modulation methodologies.*

PowerWAN admits in its own document that their testing included running an experimental service in an employee's house, with no detrimental complaints from neighbors or co-occupants of the home. The broad and sweeping conclusions drawn by PowerWAN's self interested testing are clearly in conflict with recent testing done by the ARRL. The ARRL has documented and continues to analyze the onerous affects of BPL to radio services.

PowerWAN also argues that “As the bands from 2-50 MHz are used more by digital technologies such as BPL, better utilization of these important frequencies will result.”

PowerWAN is correct in one respect. Allowing BPL in the 2-50MHz spectrum will result in only digital signals being present. All other technologies in common use today will be rendered unreliable, and quite possibly useless. The BPL technology is not compatible with the Billions of Dollars of infrastructure already in place and using the spectrum regularly. BPL using 2-50 MHz will result in only BPL using the spectrum.

On Page 7 of PowerWAN’s comments:

*BPL Interference is a Low Risk*

*PowerWAN, Inc. believes that BPL does not pose significant risks for unintended high frequency radiations that will interfere with consumer devices, amateur radio operators, or other forms of commercial communications (television, radio, mobile radio, etc.).*

*This belief is held for several reasons, described as follows:*

*...SNIP...*

*#3 Tests have not revealed any issues. In PowerWAN, Inc.’s first three-month BPL deployment, no public complaints were registered for access or in-home related interference. PowerWAN, Inc. had conducted its own in-home testing with a number of consumer devices, such as household appliances, televisions, and radios, and did not observe any radiated emissions interference from BPL signals on the in-home wiring.*

After reviewing a summary of test results conducted by the ARRL Labs, a respected FCC resource for independent study of RF issues, it is clear that PowerWAN’s ability to independently evaluate “interference” is subject to serious question. BPL does significantly impact many radio services currently protected from Part 15 devices. If the devices truly do comply with Part 15, then there is a problem with the evaluation criteria and techniques dictated by Part 15 because BPL clearly interferes with protected services.

The “tests” of BPL should include a full public disclosure of coverage areas and methods used to deploy signals. Many users of the subject radio spectrum must deal with interference issues all the time--Issues unrelated to BPL. With “noise” being such a common problem, “noise” is often blamed on faulty power line insulators and connectors. Power companies are fighting all the time to correct noise problems. Users often do not “complain” over localized noise problems because these issues are complex and time consuming to correct. It is apparent that if “noise” was a problem in the test areas, what methods did PowerWAN use to provide a suitable and convenient forum for filing and addressing “complaints?” This respondent is quite doubtful that injured parties were aware of any “testing” being conducted. How could they possibly “complain?”

On Page 9 of PowerWAN’s comments:

*...PowerWAN, Inc. asserts that heretofore arguments voiced by amateur radio forums do not meet this burden, and remain unsubstantiated and speculative without direct evidence that BPL vendors' technologies cause interference in excess of approved limitations established by FCC guidelines.*

The ARRL Labs have been testing and found that the new BPL modulation methods do interfere, and cause significant interference to protected users of the subject radio spectrum. In addition, PowerWAN fails to demonstrate how current users will interfere with BPL. CEO Wheadon powerfully illustrates a significant need to revamp Part 15 testing requirements to properly document the effects of these new modulation methods. The Part 15 rules were dictated long before OFDM innovations. In light of the ARRL tests, it appears the BPL is "flying under the radar" of Part 15. The FCC needs to address these issues before any future deployment of BPL.

Respectfully submitted...

Ford Peterson