

To the Commission:

I am Jonathan W. MacMillan, degreed Electrical Engineer, Volunteer FireFighter, and Amateur Service licensee (W2MC).

I write in opposition to the proposal.

While the Proposal has technical merit, in this case the detrimental effects more than outweigh any gain from providing data via Broadband over Power Line (BPL).

1. Interference to other services. the proposed bandwidth, as I understand it, is approximately 3 to 80 MHz. The second harmonic widens this to 160 MHz, and the (more important) third, to 240 MHz. Within this spectrum envelope lies the bulk of communication in the United States. Government, Military, Land Mobile, Amateur, Aeronautical, and Broadcast all lie within this spectrum. All will potentially be affected by BPL. One must remember the pervasive nature of the electric power system in the United States. In short, IT'S EVERYWHERE. The American Radio Relay League has shown, via other Comments, the severe impact to the Amateur Service. Wide areas of spectrum will become unusable due to BPL.

Emergency Service impact will be severe. As I noted earlier, I am a volunteer firefighter. We use the spectrum in the 150 MHz Land Mobile band. Major US cities, such as New York City, also use this same band for fire and emergency service communications. Other emergency services in the local area use the Land Mobile spectrum in 42 to 49 MHz, right on the fundamental frequencies proposed for BPL use. Moving frequency is generally NOT an option. If it were, why the "re-farming" proposals of the past few years?

My firefighting communication will be shifting "soon" to the 470 to 512 MHz band, which itself is a sub-band created from the Television Broadcast channel 14-20 in an attempt to alleviate the pressure on the available spectrum. But what of other firefighters, where this is not available? Every house I go into has electric service. Why does my emergency communications have to fight to get out past BPL noise? Who will end up paying for this proposal?

2. Overall state of the power grid. If one doubts the possibility for problems such as this, one need only look to the overall lack of maintenance already exhibited by the various power companies.

Numerous notices have been sent by the Commission to these companies due to their apparent policy of ignoring the complainant. When is the last time you have seen a power company performing routine maintenance on their overhead grid? Many appear to be operating in 'crisis mode' all the time in response to required preventative maintenance. Any slight problem with a connection is a potential rectifier, and broadband harmonic noise source. With BPL, this can only worsen.

This past week has shown plainly the extent that the electric power grid is suffering. A transmission problem in Ohio was relayed thru the grid and shut down power to 50 Million residents of the US and Canada, affecting power distribution almost 1,000 miles away from

the source. Equipment and preventative measures were supposed to be in place to prevent this from happening. After all, this is NOT the first time the lights went out in New York City and half of the East Coast. This was the THIRD TIME. The preventative measures did not work. I submit that the power company preventative measures to keep their BPL signal confined to their wires will also not work when required.

3. As also stated, I am an Amateur Radio operator. My call is W2MC. This proposal will render wide swaths of the spectrum authorized to the Amateur Service unusable. When other means of communication have failed, due to some natural or man-made disaster, Amateur radio operators routinely make the connection. I practice several times yearly off-the-grid communications.

Yes, it is a hobby. But it is one with more serious implications. While the area affected will not be experiencing BPL-related problems (since the power infrastructure will likely be heavily damaged), will I be able to hear them thru the noise? I am certified by the ARRL as an Official Relay Station, to level one in Emergency Communications. This will all be negatively impacted by the BPL proposal.

4. As I read the proposals from the power industry, I note that the proposal by the electric power companies is an attempt to have the FCC relax the present power line radiation limits. Yet, in the same breath, the electric power companies have stated that BPL already is within those limits. If so, then why do they want the limits relaxed?

5. I have watched the ARRL video of the mobile test that W1RFI made in late July of the four areas where BPL is being tested and I was appalled by the level and type of interference that BPL causes in the HF spectrum (even though W1RFI said that the radiation was within the FCC limits). The ARRL news story and the downloadable video are available at

<http://www.remote.arrl.org/news/stories/2003/08/08/2/?nc=1>

In short, it is a bad idea, and one that should not be allowed to continue.

Jonathan W. MacMillan