To: Federal Communications Commission
Washington, DC

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On the Matter of Notice of Inquiry 03-104 (Broadband Over Power-Line)

In a previous comment filing (No. 2003622364321) , I noted that the interference would occur, should the Commission allow the waiving of Part 15 levels for the stated purpose of Broadband over Power-Line (BPL). In fact, the likely interference levels are much worse than the industry claims. The industry wants to run high RF levels at the frequencies 1.7-80 MHz over power lines, which do radiate at RF frequencies. However, the services that will see interference are not in any way limited to 1.7-80 MHz. This is due to the type of AC connected consumer electronics found in virtually every home and business. Found in every such location are devices, such as televisions, radios, home entertainment, computers, telephones (corded and cordless), and other devices that have AC to DC power supplies with semiconductor diodes . Normally, these diodes see not only the 60 cycle AC which is to be to converted to DC, but also any other voltage present on the power line. These diodes are made using processes similar to integrated circuits (IC's) and many transistors. The presence of 1.7-80 MHz signals on the power line can and will be seen by the diodes (rectifying at a 60Hz rate), thereby causing interference at any multiple of 1.7-80 MHz. Hence, services using 3.4-160 MHz, 5.1-240MHz, etc, will experience interference due to harmonic re-radiation. This is certainly a concern for those services, such as police, fire, other emergency services, aviation, television and broadcast FM. The power lines will be even more efficient re-radiators at these frequencies, due to their wide spacing, and lack of precise control of that spacing. There is no upper frequency limit to this potential interference, hence cellular, PCS other emergency services, Homeland Security and television is all at risk. This will happen, despite the use of any filters installed on the AC power source end.

The undersigned believes that the proposal to allow the increase of BPL RF emission levels to be totally detrimental to the many services now utilizing the spectrum and would be an overall negative contribution to our country.

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