



**Olympia  
Amateur  
Radio  
Society**

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25 May 2004

Senator Maria Cantwell

717 Hart Senate Office Building

Washington, DC 20510

Dear Sen. Cantwell

This letter is directed to you as a member of the Senate's Commerce, Science, and Transportation Committee's Communication's Subcommittee concerning the broadband transmission of data over power lines, typically known as BPL. I am writing to you on behalf of the 82 members of the Olympia Amateur Radio Society, all of which are federally licensed Amateur Radio operators who have passed a Federal Communications Commission (FCC) examination in radio-communication technology. We are opposed to the transmission of data over power line antennas because, ultimately, it will threaten homeland security. As a matter of fact, one of our members, Mr. Paul Leach, N7GGX, has already contacted you in a letter dated 19 October 2003. He and the rest of our members are opposed to BPL. Although universal broadband service is a worthy goal, using power lines to distribute broadband data is a bad idea that should not be encouraged.

Power lines were designed to transmit electrical energy. They were not designed to transmit broadband data signals, which in fact are radio-frequency (RF) signals. When broadband data is modulated onto the 60 cycle power carrier, much of the RF energy leaks off the line and radiates, causing broadband interference to nearby radio receivers. Severe interference has been documented at test sites throughout the country and overseas where BPL is in operation.

The nation's 680,000 radio amateurs are especially concerned about this interference because it affects short waves -- a unique portion of the radio spectrum that supports long-distance, intercontinental radio communication. This broadband data is broadcast in all directions from the power lines that act as antennas. On the High Frequency (HF) bands, some of this RF energy will be reflected off the atmosphere and can be propagated thousands of miles away to other countries, where it could be received and decoded.

Licensed radio amateurs use these HF frequencies for hurricane reporting, disaster and emergency relief, and many other purposes in accordance with FCC regulations. The

Amateur Radio Service has the only failsafe emergency communications system in the world. No matter what happens, radio amateurs will be able to communicate with one another and served emergency agencies without having to rely on the expensive and vulnerable wired infrastructure, but we cannot maintain our emergency networks if BPL data is allowed because BPL will interfere with the weak radio signals we use to communicate. The state of Washington has extensive Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES) organizations in place which are integrated with and provide emergency communications for the Department of Homeland Security, the Red Cross, the Salvation Army, and other emergency organizations.

Radio amateurs support expanded broadband services to consumers at lower cost. Indeed, we have been early adopters and pioneers of new wireless technologies for decades. There are ways to deliver broadband that do not pollute the radio spectrum as BPL does. These include fiber-to-the-home, cable, DSL, and Broadband Wireless Access. None of these technologies cause interference to HF and VHF radios.

BPL is sometimes touted as a solution for rural areas. It is not. BPL data only carries a few thousand feet down a power line and then must be re-amplified. This requires a lot of hardware and would preclude its economic usefulness in areas with low population densities.

The FCC recognizes the interference potential of BPL and is in the midst of a rulemaking proceeding, ET Docket No. 04-37, that proposes new requirements and measurement guidelines for BPL systems. However, allowable broadband data power levels are already too high. BPL already interferes with emergency Amateur Radio communications in other states and countries. The FCC proposals do not go nearly far enough to protect over-the-air emergency radio communication services.

In short, BPL has a major disadvantage that is not shared by other broadband technologies and that outweighs whatever benefit it may offer. National broadband telecommunications policy should not include support for BPL, but should focus on other, more appropriate technologies. By encouraging broadband over power lines, the FCC is heading in the wrong direction. BPL – The Technology – does not interact well with others. Please do what you can to change the course of the FCC regarding this potentially harmful technology. Thank you.

Sincerely,

Leroy C. Smith, N7EIE

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