

In the Matter of ET Docket 03-104, "Broadband over4 Power Line"

July 6, 2003

I, Ronald K. Wray, a citizen of the United States of America, desire to file comments in the matter of ET Docket 03-104, commonly known as "Broadband over Power Line" or "BPL". In order to establish my bona fides, let it be known that I possess over 29 years of unbroken experience in the art and science of radio frequency (RF) telecommunications as a manager of RF services, as an engineer of RF systems, and as a RF technician. As a dedicated and knowledgeable amateur radio operator, my unbroken record of experience is of even greater duration. As a member of a long-standing and respected committee representing industrial interests, I have in the past contributed to- and continue to contribute to- numerous comments related to other Federal Communications Commission (FCC) proceedings. To date, I have not found it necessary to file similar individual comments for any proceeding. However, the topic of ET Docket 03-104 is of such paramount importance that I find it my responsibility as an informed citizen to submit such comments against the proposed relaxing of regulatory controls relative to BPL technology. Let it be known that I fully support comments filed by the American Radio Relay League (ARRL) related to this matter. Since those and similar comments adequately serve to argue the technical issues related to BPL technology, it is my intent to remind the FCC of their mandate to responsibly manage our nation's radio spectrum in the public's best interest, and argue how this responsibility is directly related to the issue at hand. I shall present my comments largely from an analogous perspective.

The radio spectrum is not unlike our natural environment in that it is finite and subject to pollution. After bitter lessons, our nation has learned to approach all endeavors that may affect the natural environment with the utmost caution. Should we fail to apply these lessons to the management of our irreplaceable radio spectrum- particularly with respect to the proposed Broadband over Power Line (BPL) technology- it is entirely possible (in fact likely) that we will pay a high price for our neglect. Such risk is not in the interest of the general public.

Much as the knowledgeable environmentalist observes the effects of human development upon the environment and is the first to voice concern when appropriate, the radio amateurs of our nation view the proposed BPL technology with extreme trepidation. It is apparent that deployment of the technology without the most stringent control will result in unacceptable levels of interference to incumbent licensees operating within that portion of the radio spectrum where BPL is to reside. Further, the introduction of such ubiquitous radio "pollution" might well render this portion of the spectrum unusable for future technologies that might prove of benefit to the general public. It remains in question is whether any such controls, however well considered, will ultimately prove adequate to protect our radio spectrum from the harmful effects of BPL. Given that the deployment of the technology has effectively been given rein to proceed, it is more likely that at best we will only succeed in limiting the degree of damage, which will surely result.

The "waters" of our radio spectrum are already contaminated by interference originating from great numbers of devices classified as Part 15 "unintentional radiators"- which are for the most part consumer electronics such as televisions and other entertainment devices equipped with poorly designed switching power supplies. Because of their broad deployment, the interference that they already introduce has proven bothersome and impossible to remedy. No amount of regulation or enforcement can ever hope to "force this poison back into the bottle," at least not within the foreseeable future. However, such existing interference shall be as nothing compared to that which would be introduced by a widespread, careless deployment of BPL- a "pollutant" that will to some degree seep into every home and even into the rural areas of our nation. In combination with the existing interference levels, it is conceivable that in a worst case the entire affected portion of the radio spectrum could be effectively rendered useless nationwide for any purpose other than BPL. Therefore, the emission compliance requirements to be placed upon the technology must be well considered and proven effective in addressing all interference concerns, prior to any deployment of BPL outside of a controlled test environment.

We as a nation cannot permit our immediate enthusiasm for any particular technological development to overrule our sense of caution (and our responsibility) when we are dealing with irreplaceable resources- whether those resources are related to our natural environment or to our radio spectrum. Many of the proponents of BPL technology have a pecuniary interest towards acceptance and deployment of the technology, and therefore it is no surprise that their comments tend to cast a rapid and unburdened deployment of BPL in the most favorable of lights. However- as demonstrated elsewhere in other comments filed against an incautious deployment of BPL, such as those filed by the American Radio Relay League (ARRL)- the physical infrastructure over which the technology is currently targeted for deployment will most certainly lead to the introduction of "pollution" in the form of strong and ubiquitous interference across a broad portion of our radio spectrum. The FCC should ensure that modifications to the existing infrastructure are performed that will to the greatest degree possible reduce or eliminate the propensity of that infrastructure to radiate undesirable interference, and the FCC must ensure that any equipment interfacing with that infrastructure be designed and constructed to stringent specifications which similarly minimize undesirable radiation.

The Federal Communications Commission (FCC), as a regulatory custodian of our radio spectrum, is charged with the responsibility of managing and protecting that spectrum in the best interest of the people of this nation. The FCC is therefore urged to look past the superficial "benefits" allegedly provided by BPL and recognize that the ultimate mandate given them by the people (through Congress) obliges that they act in the best interests of the general public by recognizing the radio spectrum as a valuable national resource and by protecting this spectrum from avoidable RF "pollution". The FCC should note that the eyes of the nation are upon them as they consider their actions regarding BPL. There exists a growing concern among the incumbent private operators of the radio spectrum (both commercial and amateur) that the FCC has developed a tendency to abrogate their mandate for responsible spectrum management in favor of entities delivering promises of future tax revenues and economic growth. There is no question that the general public has come to view potential economic gains as (at best) secondary considerations when measured against any possible negative impact to our natural environment- and we expect no less attention to priority relative to the management of our nation's radio spectrum.

Please demonstrate that the FCC shall continue to be an impartial, responsible spectrum regulator acting in the public interest and implement well considered, tested control mechanisms to ensure that the generation of harmful interference by BPL will be minimized to the greatest degree possible. Please ensure that all incumbent licensees upon the affected spectrum are provided adequate protection against harmful interference, and make adequate provision for enforcement of this protection now and in the future. Please do not modify constraints within the existing rules in order to promote a rapid and unburdened deployment of the technology, but instead apply even more stringent emissions compliance criteria with a strict testing requirement to assure that any introduced RF "pollution" be kept to the absolute minimum level achievable by modern technology. To do otherwise would not be in the common good and would appear to place the private interests of the proponents of BPL above the best interests of the general public. BPL is not an essential service. The nation possesses multiple alternative means of delivering reliable and inexpensive broadband telecommunications services to the public, each of which do not pose significant interference concerns. Thus, there can be no justification to proceed with haste towards an ill-considered deployment of BPL at the risk of this valuable resource, our radio spectrum.

Respectfully:

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