

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of) **May 1, 2004**

AMENDMENT OF PART 15) **ET Docket No. 04-37**
REGARDING NEW REQUIREMENTS)
AND MEASUREMENT GUIDELINES)
FOR ACCESS BROADBAND OVER)
POWER LINE SYSTEMS)

To: The Commission

Background

ShipCom LLC owns and operates 4 Maritime Public Coast Stations licensed by the Commission as KLB, KNN, WCL and WLO. These Public Coast Stations provide commercial HF Ship to Shore radio telephone, radio telex, data and emergency services to vessels on the high seas and to aircraft. In addition to providing services to the maritime and aviation industries, ShipCom stations also provide services to NOAA, NOAA Fisheries, the U.S. Coast Guard, the Canadian Coast Guard and Canadian Fisheries management bureau. ShipCom stations operate on 289 FCC-licensed frequencies in the HF band from 2 MHz to 25 MHz. ShipCom's flagship station WLO has been providing HF communications services to the maritime and aviation industries continuously for more than 55 years.

Millions of dollars have been invested in these FCC-licensed radio facilities that serve the maritime and aviation industries and the U.S. Government.

Comments

ShipCom urges the Commission to consider all of the ramifications of allowing the expanded implementation of BPL technology under part 15 of the Commission's rules and regulations.

ShipCom is particularly concerned that any increases in BPL transmission power will likely cause interference that will severely impact ShipCom's ability to provide reliable HF communication services to ShipCom's customers. ShipCom serves U.S. and foreign vessels and aircraft through international treaties administered by the Commission. Communication with vessels at Sea via HF radio is often difficult, especially from smaller private vessels, with low

power transmitters and marginal antenna. ShipCom uses high power transmitters (thousands of watts or more) to provide effective signal strengths to vessels. For receiving, it is important to note that ShipCom must use omni-directional antennas to monitor or "guard" the FCC-assigned ShipCom frequencies to hear calls from any vessel regardless of its location. It is only after a call is received that the ShipCom operator can employ a directional high gain antenna to improve the signal-to-noise ratio of the mobile station. ShipCom uses high gain directional RF receiving antennas, preamplifiers and band pass filters to make every effort to improve the signal-to-noise ratio encountered when communicating with off shore vessels and aircraft. Some of ShipCom's receiving antennas are supported on structures that are more than 100 feet above ground level. ShipCom has more than 100 HF antennas installed in various locations in the continental United States. It is also important to note that the NTIA study indicates that at current power levels the effective distance of interferences from BPL transmissions increases significantly as the height of receiving antennas increase. It is reasonable to assume any increase in BPL transmission power will exacerbate the problem

Although it is expensive to operate diverse sites, ShipCom's transmit and receive sites are separated by several miles to reduce interference and desensitization of its receivers. BPL transmissions in the vicinity of these receive sites could have a substantial negative effect on ShipCom's ability to serve its clients. Because of ShipCom's high power transmissions, BPL operations in the vicinity of ShipCom's transmit sites will probably not be feasible.

Increases in the noise floor of only a few db can make the difference between hearing a calling vessel or not hearing it at all.

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Because of the varying nature of HF radio propagation, it is often necessary to switch frequencies depending on the location of the vessel or aircraft, the time of day and propagation conditions. Since ShipCom operates on hundreds of frequencies in the 2 MHz, 4 MHz, 6 MHz, 8MHz, 12 MHz, 16 MHz, 18 MHz, 22 MHz and 25 MHz bands, the proposed BPL frequency notching scheme to mitigate interference would be impractical and unworkable. ShipCom is also concerned with the potential cumulative effect of many BPL systems operating simultaneously and the effects of sky wave propagation of these signals. ShipCom is also concerned with the potential for mixing of BPL signals that could result in interference being generated outside the band of frequencies being proposed for BPL service that could adversely affect other licensed spectrum users, including ShipCom's frequencies outside of the HF spectrum.

ShipCom has participated in many life-saving communications from vessels in distress who were unable to contact any other radio service for assistance. In a number of rescues, radio signals from the distressed vessels were marginal at best. An increase in the noise floor caused by additional unlicensed BPL activity could have resulted in those distress calls going unanswered and resulted in loss of life and property.

ShipCom is further concerned about the affects of BPL interference to the GMDSS (Global Maritime Distress Safety System). GMDSS is the system that has been mandated by the Commission, U.S. Coast Guard and international maritime community on vessels in lieu of licensed radio operators. GMDSS uses DSC (digital selective calling) on MF and HF frequencies to alert shore stations and other vessels of a distress situation at sea. ShipCom monitors the 2 MHz, 4 MHz, 6 MHz, 8 MHz, 12 MHz and 16 MHz DSC frequencies for distress calls. The U.S. Coast Guard also monitors these and other HF frequencies. Interference caused by increased BPL transmission power could have serious adverse affects on this critical Maritime Safety System.

The Commission is fully conversant with the special ground wave and sky wave nature of HF propagation and that no other range of frequencies exhibits these special characteristics. It is precisely because of these special characteristics that the effect of increasing BPL transmission power on unshielded power lines may not be confined to a local area.

ShipCom has not had sufficient time to fully analyze the recently released NTIA Phase-1 report to determine the impact on ShipCom's licensed HF operations.

Therefore ShipCom respectfully requests the Commission to:

- 1) Grant a 90-day extension of the Docket 04-37 comment period.
- 2) Prohibit the introduction or expansion of any unlicensed use of the HF spectrum without conclusive proof that the implementation of such unlicensed services will have no effect on licensed maritime and aircraft services.
- 3) Retain BPL power levels at their current part 15 limits.
- 4) Establish "BPL-Free Zones", by prohibiting BPL use around the FCC-licensed Maritime Public Coast station receiving locations and also around airports, military bases, hospitals and other especially sensitive facilities.
- 5) Limit BPL authorization to the LOWEST-INTERFERENCE BPL technology and any new technologies which can meet, or improve upon, the interference profile of that technology
- 6) Set realistic performance standards for interference mitigation measures.
- 7) Specify in greater detail the procedures for filing complaints and enforcing interference mitigation standards in a timely fashion.
- 8) Require BPL operators to shut down its BPL system(s) within 4 hours of an interference complaint from FCC-licensed Maritime Public Coast station receiving locations airports, military bases, hospitals and other especially sensitive facilities. (The enforcement mechanism for interference must be swift and sure. For example, it takes the FCC many months to shutdown Pirate Radio Stations in the broadcast bands that are illegally transmitting at power levels many times higher than the proposed BPL RF levels.)
- 9) Seriously consider revoking authorization for all BPL technologies IF warranted by:

- a) Information contained in any new technical studies;
- b) Demonstrated inability of the interference mitigation measures to meet the specified performance standards

Respectfully submitted,

ShipCom LLC.

Rene Stiegler III,
Managing Member