Halifax Amateur Radio Club

25 November 2005

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Director General,
Spectrum Engineering Branch
Industry Canada,
300 Slater Street,
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Subject: Response to Canada Gazette Notice SMSE-005-05 dated July 19, 2005
Consultation Paper on Broadband over Power Line (BPL)
Communications Systems

Dear Sir:

Members

The Halifax Amateur Radio Club (HARC) has been made aware that BPL testing will take place in Canada. Therefore we wish to comment on the Canada Gazette Notice SMSE-055-05 that relates to BPL testing. We appreciate the fact that significant pressure is being placed on government by the private sector to allow BPL technology to be introduced in Canada. However, our Club and Radio Amateurs throughout Atlantic Canada have significant concerns that BPL technology will have a severe adverse impact on the ability of licensed and authorised radio users to receive and communicate on the MF, HF and VHF spectrum, and in particular, on the future of the Amateur Radio Service in Canada.

The Halifax Amateur Radio Club was established in 1933 and represents over 150 licensed Amateur Radio operators in the greater Halifax area. There are over 4500 licensed Amateur Radio operators in the Maritimes, and over 50,000 in Canada. Radio Amateurs in this region maintain a sophisticated VHF/UHF terrestrial repeater linking system that extends throughout the three Maritime provinces and serves as a backup system for the provincial 800MHz communication system. Using this Radio Amateur based terrestrial linking system and our high frequency (HF) capabilities, Radio Amateurs can provide emergency communications during local, national, and international emergencies where other communications means have failed.

The American Radio
Relay League

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The HARC is actively involved in a variety of public service activities that provide specialised communication capabilities for charitable fund-raising events in this region. Radio Amateurs in Nova Scotia also work closely with the Emergency Measures Organisation in Metro Halifax and throughout the province, and have the capability of providing emergency communication backup support in times of local, regional and national disaster. For example, we provided critical communication assistance during the early stages of the Swiss Air #111 search and recovery efforts, and during 9/11. In other words, the Amateur Radio Service represents a significant resource to the local, national and international community, particularly in times of disaster.

We have reviewed your Paper and related documents on BPL technology and we believe that the introduction of BPL with the proposed emission limits, has the potential to create harmful interference to authorised and legitimate uses of the radio spectrum in Canada, including that portion of the spectrum assigned to Amateur Radio operators. Further, in its current state of development, wide-area BPL could have a devastating effect on radio users in the range 2 – 80 MHz and beyond, and deprive them of a legitimate use of this spectrum.

We agree that **specific technical standards** are required for BPL equipment and the BPL operating system. However, because power-lines are not designed for efficient transfer of Broad-Band signals***, it is essential that the installed system be made compliant with a system standard that does not create harmful interference to other licensed or authorised users of the spectrum, including the Amateur Radio portion of the radio spectrum.***

We believe that the proposed emission limits for BPL systems will create harmful interference to typical MF/HF/VHF signals that are being received by radio operators adjacent to BPL-carrying power lines. Since most Amateur Radio stations are located within 30 m of a LV or MV power line, a simple dipole antenna located near a BPL power line (often less than 30 m) will be faced with an interfering BPL signal that is substantially greater than a typical weak-signal from a distant Amateur Radio station. In our estimation, an emission level of 30 µv/m would block all reception except for very strong signals, which are not typical of low-power Amateur Radio signals. ***Therefore, BPL emission limits should ideally be 40 dB less than those being proposed, or 0.3 µV/meter at 30 meters.***

It is our understanding that in Nova Scotia at the present time, electrical transmission lines are under the regulatory authority of the Nova Scotia Utility and Review Board, while broadband provided by ILEC/CLECs is regulated by the Canadian Radio and Telecommunications Committee (CRTC) and spectrum is regulated by Industry Canada. ***In the case of BPL/PLC we urge clarification on the issue of specifically who the governing body will be and how their role within the BPL/PLC framework will be assigned.***

Further, in order to ensure that any and all concerns related to interference are resolved fairly, ***Industry Canada should immediately create a BPL/PLC interference resolution committee comprised of amateur radio association members, industry representatives and trade groups that have concerns regarding BPL/PLC deployment.*** The scope of this committee should include a BPL/PLC interference specific reporting and resolution process that would involve all above mentioned members and would provide technical and engineering advice **directly to the BPL/PLC service provider. Service providers of BPL/PLC should be required to**

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have representatives sitting on this committee, not members of their trade groups or associations. Preferably, members of this committee would be involved in the engineering, planning and provisioning stages of BPL/PLC deployment in Canada.

In order to deal directly with Amateur Radio related concerns regarding the deployment of BPL/PLC***, highly experienced and technologically qualified amateur radio operators should be included in any pre-market trials of BPL/PLC.*** The results of the trials on or near the premises of an amateur radio station should be subject to reporting directly to a special BPL/PLC interference resolutions committee whether or not harmful interference is observed. The results of any said reporting should also be subject to independent verification by a neutral third party.

In times of national or local emergencies and national disaster, amateur radio is an invaluable community resource, and must be protected. There are parts of the MF/HF/low VHF spectrum, such as 30 to 50 MHz, where BPL would least affect other users. ***It is therefore recommended that the Department judiciously choose frequency bands to be excluded, and promote BPL in those segments least likely to be affected. From our perspective, the operation of BPL would be acceptable if the amateur radio bands were avoided. However, the Department must prepare regulations and protocols that require BPL operators to communicate with, and respond to, spectrum users filing interference complaints.***

Please be assured that Radio Amateurs are not against BPL technology *per se*, and we recognise that BPL may benefit some Canadians. However, given the interference problems that have been experienced by Radio Amateurs in various countries to-date from BPL-system radiation, ***Radio Amateurs strongly believe that it is incumbent upon the Department to regulate BPL equipment and systems to minimise interference to all HF radio services from these unconventional, non-radio data and telecommunications systems.***

We thank you in advance for your consideration of our comments and suggestions.

Sincerely yours,

Bill Elliott, VE1MR

Bill Elliott – VE1MR
President, Halifax Amateur Radio Club