

Attached are my comments to:

Notice No. SMSE-005-05 – Consultation Paper on Broadband over Power Line (BPL) Communication Systems

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Director General, Spectrum Engineering Branch  
Industry Canada,  
300 Slater Street,  
Ottawa, ON K1A 0C8

**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 or Madam:

Calgary Amateur Radio Association wishes to comment on the use of Broadband over Power Line (BPL) communications systems. Calgary Amateur Radio Association has been in existence for approximately 50 years (having been incorporated as a Society in 1956) and represents approximately 250 amateurs.

Broadband over Power Line has been proposed as a means of bringing high speed internet to remote areas where hard wire cabling may be expensive due to the low number of customers and the distances between them. Broadband over Power Line has also been proposed as an urban system for providing high speed internet within cities and towns.

Broadband over Power Lines has the potential to cripple the use of the radio spectrum below 30 Mhz for weak signal use, and severely compromise this spectrum for use of short wave radio listeners. The VHF spectrum will also suffer to a lesser extent. Power Lines were never designed to be carriers of RF energy in the spectrum of 1 to 30 Mhz and will radiate these frequencies if used for the purpose of Broadband Internet facilities. Due to the length of power lines, in the MF band from

300 to 100 metres and in the HF band of 100 to 10 metres power lines will function as radiators of semi-infinite length. Away from power lines RF energy will decrease as an inverse first power law, rather than an inverse square law. This greatly increases the ability of BPL to interfere with MF and HF services over wide areas, and greatly reduces the isolation of other HF services to interference from BPL. Interference to VHF services will also exist and the same inverse first power law will govern signal strengths of BPL interference.

BPL has been tested in the US and in Europe and has been found to cause interference to other users of the HF spectrum.

Other means of providing High Speed Internet services to remote and less populated areas exist. Two competing services are available in the areas outside of Calgary. Both use UHF spectrum devices mounted on cell phone like towers and each tower can service many users. These services have installation fees of \$300 to \$500 as a one time cost per customer and have monthly fees similar to ADSL and cable services (around \$40.00/month). Fees of this nature have been widely accepted by high speed internet customers. Remote users of high speed internet are not from the economically disadvantaged sector of the Canadian economy and can well afford service at these price levels. The same is true of high speed internet consumers in cities and towns.

Customers looking for service who come from the low end of the economic spectrum still have the option of dial-up services, with long distance packages available at less than one cent per minute in Alberta these services are inexpensive. Customers who lack computers may use schools and public libraries, which is the situation that obtains at the present time. None of these options explicitly require Broadband to be delivered over power lines.

Broadband over Power Lines is a miss-use of scarce HF radio spectrum. Broadband over Power Lines may provide a lower cost entry for companies to become Internet Providers, but the cost of equipment will still be present and has not been shown to be less for Internet Providing companies than UHF equipment which will NOT produce deleterious effects on HF spectrum use. Cost of entry for consumers may be higher, but as these UHF based systems become more available in the market place, costs will come down. The cost history of cell phones gives us this assurance. Consumers for high speed internet services are not economically disadvantaged and do not need lowest cost options at the expense of other services.

Thank you for your attention

Arnold Rivett VE6CN  
President  
Calgary Amateur Radio Association