

**March 21, 2004**

**Dear FCC Chairman and Commissioners:**

Please reconsider allowing Broadband over Power Lines (BPL) to be used. The recorded evidence demonstrates a significant interference issue and there are other broadband options available -- even in rural areas.

From my research of available material on the use of Broadband over Power Lines for Internet access, it appears to me that BPL is an interesting use of the power industry's existing infrastructure, but that it will turn overhead power lines that are BPL-enabled into Part 15 broadcast antennas that will greatly disrupt communications over large areas.

**Have you listened to any of the recordings of BPL noise on HF frequencies?**

**Video:** <<http://www.arrl.org/tis/info/HTML/plc/#Video>>

**Audio:** <<http://www.arrl.org/tis/info/HTML/plc/#Audio>>

**-- Why Make BPL Available?**

1) If the point in making BPL available is to provide broadband internet access available to areas with a low population density, the I believe it is unnecessary since people in those areas already have access to broadband two-way satellite Internet access through companies such as <http://www.direcway.com/>. Some areas also have access to wireless broadband, like that provided by <http://www.thetekshop.com/internet/>. It is transmitted from commercial towers and uses rectangular antennas at customer sites that are approximately only a foot square. In other words, there is existing, cost-effective technology already in place and BPL is not needed.

2) There is no point in making BPL available in high population density areas since these are already served by broadband providers using 802.11, Cable TV, and Telephone DSL technologies.

**-- Learning from Others**

3) The United States should not reinvent the wheel; we should learn from the experience of other countries. From what I have read so far, it appears that Japan has decided against BPL; Finland has decided against BPL; Norway has decided against BPL; Great Britain is debating its use; Germany is debating its use.

### **-- Example of interference from another Part 15 device**

4) We have seen approved Part 15 devices that were working properly, but interfering with HF communications. The wireless modem jacks made by the Phonex Corporation caused some serious issues until they were changed to a non-interfering frequency.

### **-- Point-source Part 15 Transmitters are One Thing, Using a Power Grid as a Transmitting Antenna is Quite Another**

5) If BPL consisted of rarely occurring, point-source, Part 15 transmitters, the amount of interference might be acceptable. However, since BPL can turn entire electric grids into a radiation source, the interference can hardly be avoided. The legal limit of 30  $\mu\text{V}/\text{m}$  at 30 meters will result in a strong signal to nearby amateur HF installations. I would say that at most homes and many commercial installations, it would be impossible to get an HF antenna over 30 meters away from power lines. Therefore, the signal level could easily be much higher than 30  $\mu\text{V}/\text{m}$ .

### **-- Who will BPL Negatively Impact?**

6) Amateur Radio "Ham" radio operators who use the airwaves to assist local, state, and federal agencies (FEMA, State EMA, local EMA; the American Red Cross; the Salvation Army; and other relief agencies during times of disaster. The agencies and organizations assisted by Hams participating in:

- Amateur Radio Emergency Service
- RACES
- SATERN
- MARS
- Hurricane Watch Net
- Central US Earthquake Net
- and other emergency communications groups

will be greatly affected.

The Federal "SHARES" communication system will be affected.

Low VHF public safety communications may be affected.

HF Aviation communications can be affected

**-- References**

Most of the references on this ARRL page are non-ARRL sources:

"Broadband Over Power Line (BPL) and Amateur Radio"

<<http://www.arrl.org/tis/info/HTML/plc/>> is a very long page of links to many resources.

**Sincerely,  
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