

FCC Now Accepting Comments in "Broadband Over Power Line" Inquiry



The FCC seeks comments on the advisability of using electrical power lines to deliver broadband and Internet services to homes and businesses.

NEWINGTON, CT, Apr 30, 2003--The FCC has released its *Notice of Inquiry (NOI)* on the deployment of "Broadband over Power Line" (BPL) technology and now is accepting comments. The Commission initiated the proceeding, ET Docket 03-104, at its April 23 meeting, but it did not release the complete *NOI* until April 28. A form of carrier-current communication better known as power line carrier (PLC), the technology has raised concerns of substantial interference to the Amateur Radio HF bands. BPL would couple high-frequency RF to parts of the power grid and use existing power lines as the transmission medium to deliver broadband and Internet access.

The FCC has expressed unabashed enthusiasm for BPL. ARRL CEO David Sumner, K1ZZ, says Commission members have been acting more like cheerleaders than regulators. "We were disappointed in the tenor of some commissioners' statements, but we were encouraged by the fact that in the *NOI* itself the FCC did point out that licensed services--including Amateur Radio--'must be protected from harmful interference' from BPL," he said. BPL and the FCC's attitude toward it will be the subject of Sumner's "It Seems to Us . . ." editorial in the June issue of *QST*. Sumner pledged that the ARRL would do everything in its power to hold the FCC to its word. "We have a long, hard fight ahead of us," he concluded in his *QST* commentary.

In the *NOI*, the FCC acknowledges the interference risk from BPL. "The multiple-carrier transmission nature of the new high-speed BPL technology could pose increased risk of harmful interference, and thus new BPL devices may need a higher degree of oversight to ensure that authorized users are not subject to interference," the FCC said. The new so-called "access BPL" and "in-home BPL" devices operate on multiple carriers spread over a wide spectrum, which could be as much as from 2 MHz up to 80 MHz. Data throughput for access BPL is claimed to be comparable to DSL (digital subscriber line) or cable modem technology.

The major interference threat to amateurs comes from access BPL, because its signals are not confined within a building but can radiate from outside power lines--possibly for great distances. Additionally, the ARRL has worked with some in-home BPL device manufacturers to have their equipment notch out amateur frequencies. The FCC also concedes that close proximity of access BPL equipment on utility poles might affect--and be affected by--cable TV and DSL service.

Current FCC Part 15 rules limit the amount of RF energy that can be injected into the power lines, but, as the FCC concedes, "the new generation of high-speed BPL devices that use wide spectrum was not contemplated" when those rules were formulated. The FCC has invited comments on possible changes to those rules.

The FCC also seeks information on a possible access BPL standards, spectrum and bandwidth, modulation techniques and data transmission speeds. Additionally, the Commission seeks the status of BPL development and anticipated deployment in the marketplace.

ARRL Lab Manager and RFI guru Ed Hare, W1RFI, has cautioned that deployment of BPL could affect every amateur in communities where its deployed. He said his own computer-model analyses of interference potential from access BPL/PLC suggest "a significant increase in noise levels" from deployed BPL/PLC systems.

"Right now with BPL/PLC, there are more questions than answers, and until those questions are answered, these systems should not be widely deployed," Hare said. "The time to raise and answer these questions is now. I truly hope that the *NOI* will provide a means for the FCC to do just that."

The ARRL Lab has prepared a comprehensive information page, "[Power Line Communications \(PLC\) and Amateur Radio](#)," on the ARRL Web site (see sidebar "More Information on BPL/PLC and Ham Radio"). ARRL Lab staff members also plan to visit sites where BPL is undergoing field testing.

The complete *NOI* is available on the FCC Web site. The FCC now is accepting electronically filed comments via its Electronic Comment Filing System ([ECFS](#)). Under ECFS Main Links, click on "Submit a Filing." In the "Proceeding" field, enter "03-104" and complete the required field. Comments may be typed into a form or you may attach a file containing your comments. Comments also may be submitted via e-mail, per instructions on the ECFS page.

The deadline for comments in this proceeding will be 45 days after publication of the *NOI* in the *Federal Register*.

More Information on BPL/PLC and Ham Radio

The ARRL Lab has prepared a comprehensive information page, "Power Line Communications (PLC) and Amateur Radio," on the ARRL Web site. The Web site contains files and links of information about PLC and related broadband technologies and how they may adversely affect Amateur Radio and other HF radio operation.

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