

Before the

FEDERAL

COMMUNICATIONS COMMISSION

Washington, DC 20554

In the matter of

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ET

Docket No. 03-104

Inquiry Regarding Carrier Current )

Systems Including Broadband over )

Power Line Systems )

Reply Comments of James H. Scott, W9KV

I have been licensed by the FCC since 1947 and currently hold the Amateur Extra Class license.

I have been continuously active in HF amateur radio operation and also for many years in VHF

operation. I currently participate in the Colorado Amateur Radio Emergency Service which

includes weekly digital operation on the HF amateur bands. I held the Radiotelephone First

Class license. Further, I was employed for 35 years as a Technician/Engineer/Manager at

CBS-TV - WBBM-TV in Chicago.

#### INTRODUCTION

I agree with the Commission's desire to encourage the availability of choices in Internet and

telecommunications services and to provide broadband telecom services to un-served areas.

However, I believe that Broadband over Power Lines as presently configured is deeply flawed.

While my concerns are obviously about interference to my amateur radio activities I am also very

concerned about the impact of interference to the many other incumbent HF and low VHF users.

#### DISCUSSION

The comments of The Power Line Communications Association ("PLCA") and the United

PowerLine Council ("UPLC") include the statement, "None of these field trials have caused any

interference to home entertainment equipment, licensed wireless services or other spectrum

users".<sup>1</sup> Yet no documentation is submitted to support this statement.

The comments of the American Public Power Association include this statement, "Further, to the

extent that interference is demonstrated, there should be an attempt to accommodate BPL, even if

it means that existing communications providers may have to share or transfer bandwidth." <sup>2</sup>

This proposed solution to interference to incumbent HF users is of course unacceptable.

The ARRL, the National Association for Amateur Radio, carried out tests July 27-30, 2003 in

four BPL test areas. The tests used an antenna mounted on an automobile and a typical amateur

radio transceiver while driving around in the test areas.<sup>3</sup> The signals on the amateur radio service

bands that were tested from the BPL systems in the test areas were very strong and from my years

of experience in amateur radio operation with an identical transceiver were definitely of a

sufficient level as to cause harmful interference. The tests clearly demonstrated that harmful

interference from BPL to amateur radio HF communications is not only possible, but very likely.

#### CONCLUSIONS

It appears that the proponents of BPL have made no tests of their own or in collaboration with

HF and low VHF incumbents to determine with any certainty that interference to the incumbent

services will not occur.

It further appears that some proponents of BPL expect that the Commission would if necessary

further relax Part 15 rules to assure that BPL will provide dependable service. Further they

suggest that if interference occurs to incumbents, the incumbent service might be moved to other

frequencies. This of course is impossible due to the international nature of HF frequency

allocations.

The tests made by ARRL, though empirical in nature, clearly indicated serious interference

potential. There is no doubt that extensive collaborative tests by BPL and incumbent HF and low

VHF users must be undertaken before BPL is deployed.

Most troubling is that in spite of glowing claims by the proponents of BPL it is in its present

form seriously technically flawed. State of the art broadband data transmission uses coaxial

cable, fiber, and wireless platforms. Coaxial cable and fiber provide a closed means broadband

of data transmission which are very unlikely to radiate interference to incumbent services or to

experience interference from incumbent services.

The electric power industry owns the right of way to just about every home and business in the

nation. Using their right of way and modern technology, i.e. cable and fiber, they can provide

alternate choices of Internet service and hence competition free of the very serious shortcomings

of the proposed method. In particular, the use of fiber with its extreme bandwidth and immunity

from interference from any electromagnetic sources, opens the way for future services yet

unknown.

As to the Commission's valid concerns about the un-served and under served in rural areas,

perhaps it is time for the Congress to consider enacting a program like the REA that brought

electricity to rural areas in the 1930s to bring broadband to these areas.

In the fewest of words, BPL as presently proposed must not be deployed until comprehensive

tests show that it will not cause interference to incumbent users of the HF and low VHF

spectrum nor receive interference from those users.

Respectfully submitted,

James H. Scott

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- 1 Comments of The Power Line Communications Association ("PLCA") and the United PowerLine Council ("UPLC"), March 3, 2003
- 2 Comments of the American Public Power Association, July 28, 2003
- 3 ARRL Test Video at: [http://216.167.96.120/BPL\\_Trial-web.mpg](http://216.167.96.120/BPL_Trial-web.mpg)