

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Carrier Current Systems, including)	ET Docket No. 03-104
Broadband over Power Line Systems)	
)	ET Docket No. 04-37
Amendment of Part 15 regarding new)	
requirements and measurement)	
guidelines for Access Broadband over)	
Power Lines Systems)	

OPPOSITION OF THE UNITED POWER LINE COUNCIL

Pursuant to Section 1.429 of the Federal Communications Commission (“FCC”) Rules, the United Power Line Council (“UPLC”) hereby submits this opposition to petitions for reconsideration of the *Report and Order* in the above referenced proceeding.¹ The UPLC believes that the *Report and Order* largely struck the right balance between protecting against potential interference and promoting the public interest in BPL deployment, and it does not believe that further restrictions on BPL operations are warranted. As such, the FCC should not expand its limited special protections in the high-frequency bands, and it should not change the notching requirements and extrapolation factor for measuring emissions, as requested in various petitions.

¹ *Carrier Current Systems, including Broadband over Power Line Systems*, Report and Order, ET Docket No. 04-37, 19 F.C.C.R. 21,265 (“*Report and Order*”).

I. The FCC Should Not Expand Its Limited Special Protections.

In balancing the potential for interference against the magnitude of the risk of its occurrence, the FCC limited restrictions on BPL operations to discrete bands of exclusion, exclusion zones and consultation areas. The FCC found that the interference potential from Part 15 compliant BPL operations is low and that “any harmful interference is limited to areas within a short distance of the power lines used by this technology.”² Even so, the FCC agreed “that critical Federal Government and other services specified by NTIA and public safety warrant additional protection,” which the FCC did not consider to be burdensome on BPL operators, in part because the NTIA itself had limited both the number of frequencies and the size of the geographic area protected.³

“For all other radio communication operations not addressed in these special provisions, radio operators have the opportunity to inform local BPL operators of the pertinent details of their operations and BPL operators have the opportunity to apply that information as appropriate to

² *Report and Order* at ¶24.

³ *Report and Order* at ¶49. *See also* Letter from Frederick R. Wentland to Edmond J. Thomas in ET Docket No. 04-37, filed Sept. 24, 2004 (cutting in half the number of frequencies protected in the excluded bands and tailoring the geographic areas according to different incumbent services and BPL installations); *and* Letter from Frederick R. Wentland to Edmond J. Thomas in ET Docket No. 04-37, filed March 1, 2005 (further reducing the number of facilities to protect in geographic areas). *See also Report and Order* at ¶51 (explaining that special protections for public safety services were justified by the importance and nature of the communications involved, even though there were only rare circumstances in which public safety operations could receive interference).

prevent interference.”⁴ Thus, the Commission recognized that there is no need to require BPL operators to consult in advance with other licensees generally, not only because the potential for interference is low and manageable, but because implicitly BPL operators have every incentive to consult in advance with local licensees.⁵

The new rules require that BPL operators post information about BPL deployments to a centralized BPL database, which licensees can use to resolve harmful interference from BPL operations informally. Using this procedure, licensees are notified about BPL deployments – and the FCC does require that BPL operators post this information thirty days in advance of actual operation. Certainly the UPLC and others oppose advance notice on the BPL database, because it invites abuse by other broadband competitors. If the FCC does decide to eliminate the advance notice requirement upon reconsideration, BPL operators still would be required to notify licensees about BPL deployments after they commenced operation. Therefore, other licensees are protected against BPL interference without mandating advanced consultation and imposing strict

⁴ *See also Report and Order* at ¶53 (declining to establish “Access BPL-free zones” for public safety and amateur operations).

⁵ BPL is an unlicensed operation that must not cause harmful interference to licensed users and must accept harmful interference from them. *See also Report and Order* at ¶59 (“The concerns of those commenting parties who argue that the mitigation requirements would not be sufficient to protect their operations from interference by BPL operations are misplaced. That protection will be provided by: 1) the emissions limits for Access BPL systems; 2) the provisions for consultation areas, excluded bands, and exclusion zones; and 3) the requirement that Access BPL systems not cause interference.”)

deadlines for responding to their complaints, which would impose undue administrative burdens on BPL operators.

Just as the FCC should not impose further advance consultation and interference mitigation requirements, neither should it require BPL operators to avoid additional frequencies or areas altogether. Several petitioners have suggested such further restrictions on BPL operations.⁶ These are the same arguments that the Commission has heard before and rejected.⁷ Although AMST has attached a new study to its petition, it fails to explain why it was unable to present this information earlier and concedes that the study itself is based on “educated guesses” about BPL.⁸ These claims of interference from BPL are speculative, but the impact of

⁶ ARRL Petition at 19 (complaining that the FCC should have required BPL to avoid Amateur frequencies); ARINC Petition at 1 (requesting that the FCC restrict BPL operations on low voltage access and in-house BPL systems that use the 74.8-75.2 MHz aeronautical navigation frequencies); *and* Petition for Reconsideration of The Association for Maximum Service Television, Inc. at 2 (filed Feb. 7, 2005)(urging the FCC to prohibit BPL operations above 50 MHz until the DTV transition is complete). (hereinafter, AMST Petition)

⁷ *See* Comments of ARINC in ET Docket No. 04-37 at 9 (filed May 3, 2004), citing Reply Comments of ARINC in ET Docket No. 03-104; Comments of the ARRL at 19; *and* Comments of The Association for Maximum Service Television, Inc. in ET Docket No. 04-37 at 2 (filed May 3, 2004), citing Joint Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters in ET Docket 03-104 at 3-4, 6-8 (filed July 7, 2003). *But see, Report and Order* at ¶19 (stating “we also see no basis for subjecting Access BPL systems to requirements for addressing interference complaints that are different and more stringent than our procedures for addressing interference from other types of unlicensed devices.”) *And see Report and Order* at ¶24 (stating “[w]e do not believe that Access BPL presents a serious threat of interference to broadcast television service on channels 2 to 6.”)

⁸ The Commissions rules require that a petition for reconsideration that relies on new facts must 1) relate to events which have occurred or circumstances that have changed since the last opportunity to present these facts to the FCC; and 2) the facts were unknown to petitioner earlier and could not have been known through the exercise of ordinary diligence. *See* 47 C.F.R. §§1.429(b)(1)-(2). *See also* AMST Petition at Exhibit 1 “Interference Effects into Low VHF Television Arising From Broadband over Power Line” at 26 (conceding that “[t]here was lack of specificity for certain critical parameters which necessitated making educated guesses.”).

their proposed restrictions on BPL are not. Restricting BPL operations in other bands and areas will impair BPL performance and discourage its deployment.⁹ The Commission should continue to limit the restrictions on BPL operations, recognizing that BPL poses a low potential for interference and that it must operate on an unlicensed, non-interference basis to other licensed services.¹⁰

II. The FCC Should Not Revise the Extrapolation Factor or the Notching Requirements.

In the *Report and Order*, the Commission rejected comments urging it to adopt a 20 dB decade extrapolation factor for frequencies below 30 MHz.¹¹ The Commission explained that there simply was inconclusive evidence that the FCC should depart from the existing 40 dB decade extrapolation factor.¹² Similarly, the Commission granted BPL operators wide discretion with regard to the techniques for interference

⁹ For example, restricting low voltage and in-house BPL operations from using aeronautical frequencies as ARINC suggests would significantly impact the effective bandwidth available, thereby reducing throughput speeds. Meanwhile, restricting BPL from operating above 50 MHz as AMST suggests would eliminate even more bandwidth for BPL operations.

¹⁰ As the Commission and NTIA recognized, low voltage lines and underground lines pose less of an interference threat than medium voltage overhead lines. *See Report and Order* at ¶49. These factors underlie the FCC's decision not to prohibit low-voltage Access BPL or In-house BPL operations from aeronautical frequencies, as ARINC requests.

¹¹ *See Report and Order* at ¶109, citing reply comments of ARINC at 2; comments of ARRL at 15.

¹² *Id.*

mitigation and specifically declined to prescribe the bandwidth of notching capability.¹³

In their petitions for reconsideration, ARINC and ARRL raise the same arguments against the existing extrapolation factor that they raised earlier on the record. Rather than actual measurements, both rely on models that predict that power lines will act as “countless miles of transmission lines all radiating RF energy along their full length,” a view which the FCC has repeatedly rejected.¹⁴ The conclusions from these models are only as reliable as the inputs, which are questionable.¹⁵ Moreover, they cite to NTIA for support, even though NTIA itself has stated for the record that it fully supports the Commission’s distance extrapolation.¹⁶ In any event, the FCC has stated that it would revisit the issue if more information is provided that shows that an alternative extrapolation factor would be more appropriate.¹⁷ Given that ARINC and ARRL have failed to provide any new information, the Commission should not reconsider the 40 dB decade extrapolation factor for frequencies below 30 MHz.

¹³ *Report and Order* at ¶¶67.

¹⁴ *See Report and Order* at ¶¶39 and *Notice of Proposed Rulemaking* at ¶¶36.

¹⁵ For example, both the ARRL and ARINC models are based upon center-fed lines which the FCC notes is in practice “all but impossible to do without cutting the power line,” and which, if possible, would create phase mismatches and standing waves that are not actually produced by BPL deployments. *See Report and Order* at ¶¶101.

¹⁶ *See Letter from Frederick R. Wentland to Edmond J. Thomas in ET Docket No. 04-37, filed Sept. 24, 2004.*

¹⁷ *See Report and Order* at ¶¶109.

The Commission also should reject ARINC's request for clarification as to the depth and the bandwidth of the notch that BPL operators would use to mitigate harmful interference. The Commission has addressed these issues; and as noted above, has declined to specify requirements for use of frequency avoidance capabilities. As such, ARINC seeks reconsideration, not clarification, and has presented no new facts that warrant reconsideration of the Commission's decision on the issue.¹⁸

Moreover, no such "clarification" is even necessary. First, ARINC confuses a Part 15 equipment certification requirement with the general Part 15 rules requiring BPL operators to mitigate interference.¹⁹ The one requirement is only indirectly related to the other. Second, the essence of ARINC's concerns are already addressed, because the new rules require a notching capability of "at least 20 db" below the applicable emission limits in the frequency bands below 30 MHz.²⁰

¹⁸ See *Report and Order* at ¶67.

¹⁹ Compare 47 C.F.R. §15.611(c)(1)(i) and 47 C.F.R. §15.5(b).

²⁰ See *Report and Order* at ¶67. See also 47 C.F.R. §15.611(c).

Conclusion

The UPLC appreciates licensees' concerns about interference from BPL, but does not agree that any more restrictions on BPL are appropriate or justified. In the final analysis, BPL is an unlicensed operation and must protect licensees from harmful interference. The FCC has set radiated emission limits for BPL, and it has imposed additional interference mitigation requirements and administrative requirements that reduce further the already low potential of interference to licensed operations in the HF band generally. It has extended special protections to certain services, such as aeronautical, maritime and public safety. As such, the Commission has adopted a cautious approach to BPL that protects licensees from interference.

At the same time, additional restrictions would impair the performance and discourage the deployment of BPL. Excluding frequencies will reduce throughput speeds, and restricting BPL in additional areas would discourage its deployment to consumers that may have no choice of broadband provider or no broadband access at all. The FCC was aware of these considerations, and reached an appropriate balance of the interests in promoting broadband access while protecting against harmful interference. Petitioners have raised no new facts or arguments, and the FCC should therefore deny their requests.

WHEREFORE, THE PREMISES CONSIDERED, the UPLC is pleased to provide this Opposition to certain petitions for reconsideration of the *Report and Order* as described herein.

Respectfully submitted,

UPLC

By:

Brett Kilbourne
Director of Regulatory Services
and Associate Counsel

1901 Pennsylvania Avenue, N.W.
Fifth Floor
Washington, D.C. 20006

(202) 872-0030

March 23, 2005.

CERTIFICATE OF SERVICE

I, Brett Kilbourne hereby certify that I have served on this 23rd day of March, 2005 a copy of the foregoing Opposition upon the following parties by first-class mail, postage pre-paid.

AARL, the National Association for
Amateur Radio
Christopher D. Imlay
Booth, Freret, Imlay & Tepper, P.C.
14356 Cape May Road
Silver Spring, MD 20904-6011

Aeronautical Radio, Inc.
John L. Bartlett
David E. Hilliard
Wiley, Rein & Fielding LLP
1776 K Street NW
Washington, DC 20006

American Petroleum Institute
Wayne V. Black
Nicole B. Donath
Keller & Heckman LLP
1001 G Street, Suite 500 West
Washington, DC 20001

Amperion, Inc.
Steve Greene
Two Tech Drive
Andover, MA 01819

Cohen, Dippell and Everist, P.C.
Donald G. Everist, P.E.
1300 L Street, NW, Suite 1100
Washington, DC 20005-4107

Current Technologies, LLC
Mitchell Lazarus, Esq.
1300 North 17th Street
11th Floor
Arlington, VA 22209

G. Scott Davis
118 Glenwood Road
Bel Air, MD 21014-5533

Steven Matda, KE4MOB
13353 Holbrook Street
Bristol, VA 24202
Association for Maximum Service
Television, Inc.
David L. Donovan
Victor Tawil
4100 Wisconsin Avenue, N.W.
Washington, DC 20016

Mary Newcomer Williams
Darrin Hurwitz
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington, DC 20004-2401

W. Lee McVey, P.E.
1301 86 Court, NW
Bradenton, FL 34209-9309

National Antenna Consortium &
Amherst Alliance
Donald Schellhardt, Esq.
1123 Clement Street
San Francisco, CA 94118

ss

Brett Kilbourne