

Hazardous substances remain at the Site above levels that would be allowed for unlimited use without restrictions. It is the policy of EPA to conduct five-year reviews of pre-SARA remedies which leave hazardous substances on-site. EPA completed a five-year review of this Site on September 30, 2003. The next five-year review should be completed by EPA and/or NYSDEC before September 30, 2008.

List of Subjects in 40 CFR Part 300

Environmental protection, Chemicals, Hazardous substances, Hazardous waste, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: March 4, 2004.

Kathleen C. Callahan,

Acting Regional Administrator, Region 2.

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 15

[ET Docket No. 03-104 and ET Docket No. 04-37; FCC 04-29]

Broadband Power Line Systems

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This document proposes to amend the Commission's rules to adopt new requirements and measurement guidelines for a new type of carrier current system that provides access to broadband services using electric utility companies' power lines. Because power lines reach virtually every home and community in the country, we believe that these new systems, known as Access broadband over power line or Access BPL, could play an important role in providing additional competition in the offering of broadband services to the American home and consumers, and in bringing Internet and high-speed broadband access to rural and underserved areas.

DATES: Comments must be filed on or before May 3, 2004, and reply comments must be filed on or before June 1, 2004.

FOR FURTHER INFORMATION CONTACT: Anh Wride, Office of Engineering and Technology, (202) 418-0577, e-mail: Anh.Wride@fcc.gov, TTY (202) 418-2989.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Notice of*

Proposed Rule Making, ET Docket No. 03-104 and ET Docket No. 04-37, FCC 04-29, adopted February 12, 2004, and released February 23, 2004. The full text of this document is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY-A257), 445 12th Street, SW., Washington, DC 20554. The complete text of this document also may be purchased from the Commission's copy contractor, Qualex International, 445 12th Street, SW., Room, CY-B402, Washington, DC 20554. The full text may also be downloaded at: www.fcc.gov. Alternate formats are available to persons with disabilities by contacting Brian Millin at (202) 418-7426 or TTY (202) 418-7365.

Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments on or before May 3, 2004, and reply comments on or before June 1, 2004. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121, May 1, 1998. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number.

All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal

Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commission's contractor, Natek, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8 a.m. to 7 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class mail, Express mail, and Priority Mail should be addressed to 445 12th Street, SW., Washington, DC 20554.

Summary of Notice of Proposed Rulemaking

1. The Notice of Proposed Rulemaking ("NPRM") proposes to amend part 15 of the Commission's rules to adopt new requirements and measurement guidelines for a new type of carrier current system that provides access to broadband services using electric utility companies' power lines. Because power lines reach virtually every home and community in the country, we believe that these new systems, known as Access broadband over power line or Access BPL, could play an important role in providing additional competition in the offering of broadband services to the American home and consumers, and in bringing Internet and high-speed broadband access to rural and underserved areas. At the same time, we are cognizant that the possibility of widespread operation of Access BPL raises interference concerns and that we must protect licensed radio services from any harmful interference that might occur. In this regard, we are proposing to require that BPL systems and devices incorporate capabilities to mitigate harmful interference should it occur. We are also proposing to adopt administrative requirements to aid in the identification and resolution of harmful interference from Access BPL systems. Finally, we are proposing to clarify certain measurement guidelines for all types of carrier current systems that use electric wiring and electrical outlets within homes and buildings to transfer information between computers and other electronic devices. With these proposals, we take an important step towards promoting the deployment of new broadband networks that are expected to enhance the economic, educational and social well-being of all Americans. Specifically, we believe that

the proposed changes will remove regulatory uncertainties and facilitate the introduction and use of this promising new technology.

Description of BPL

2. Traditionally, various low-power, unlicensed devices or systems have used the alternating current (AC) power lines to carry information by coupling radio frequency (RF) energy to the AC electrical wiring. These unlicensed devices include AM radio systems on school campuses and devices intended for the home, such as intercom systems and remote controls for electrical appliances and lamps. Until recently, carrier current devices have operated generally on frequencies below 2 MHz with relatively limited communications capabilities. Because of the inherent impedance and attenuation variations of power lines and noise from devices such as dimmer switches, motorized electrical appliances, and computers switching on and off, reliable high-speed communications over power lines have been difficult to achieve. However, the availability of faster digital processing capabilities and the development of sophisticated modulation schemes have produced new designs that can overcome these technical obstacles. These new designs have led to the development of new BPL systems that use spread spectrum or multiple carrier techniques and that incorporate adaptive algorithms to counter the noise in the line.

3. The new low-power, unlicensed BPL systems couple RF energy onto the existing electric power lines to provide high-speed communications capabilities. BPL systems may operate either inside a building ("In-House BPL") or over utility poles and medium voltage electric power lines ("Access BPL"). In-House BPL systems use the electrical outlets available within a building to transfer information between computers and between other home electronic devices, eliminating the need to install new wires between devices. Using this technology, consumers can readily implement home networks. Access BPL systems can be used to provide high speed Internet and other broadband services to homes and businesses. In addition, electric utility companies can use Access BPL systems to monitor, and thereby more effectively manage their electric power distribution operations. Given that Access BPL capability can be made available in conjunction with the delivery of electric power, it may provide an effective means for "last-mile" delivery of broadband services and may offer a competitive alternative to digital

subscriber line (DSL), cable modem services and other high-speed Internet technologies.

4. Most Access BPL systems today operate on frequencies up to 50 MHz with very low power signals spread over a broad range of frequencies. These frequencies are also used by licensed radio services that must be protected from harmful interference as BPL systems operate on an unlicensed basis under part 15 of the Commission's rules. In the radio spectrum below 50 MHz, incumbent authorized operations include fixed, land mobile, aeronautical mobile, maritime mobile, radiolocation, broadcast radio, amateur radio terrestrial and satellite, and radio-astronomy. Users of this spectrum also include, for example, public safety and Federal government agencies.

Existing Part 15 Rules for BPL

5. Carrier current devices, including BPL equipment, are subject to the Commission's existing part 15 rules for low-power, unlicensed equipment that operates on a non-interference basis. At the present time, the part 15 rules provide specific radiated and conducted emission limits for carrier current systems operating below 30 MHz. The radiated emission limits apply from 9 kHz and vary with frequency. There is no limit on conducted emissions for carrier current systems that contain their fundamental emission within the standard AM broadcast band of 535 to 1705 kHz and are intended to be received using standard AM broadcast receivers. All other carrier current systems operating below 30 MHz are subject to a conducted emission limit only within the AM broadcast band. Carrier current devices that do not operate at frequencies below 30 MHz are subject to the general conducted limits below 30 MHz.

Notice of Inquiry

6. In April 2003, the Commission issued a *Notice of Inquiry* (Inquiry), 68 FR 28182, May 23, 2003, on BPL technologies and systems. The *Inquiry* was issued to solicit comments to assist the Commission in reviewing its part 15 rules to facilitate the deployment of Access BPL while ensuring that licensed services continue to be protected. In the *Inquiry*, the Commission encouraged continued deployment of Access BPL systems that comply with the existing rules.

7. In the *Inquiry*, the Commission asked for comments on the characteristics of BPL technology, the status of deployment of BPL and any standards work related to BPL. The Commission also asked for comments

on the probable interference environment and propagation patterns of BPL and the mitigation techniques used by BPL to avoid interference. The Commission further asked whether it would be possible to develop a standardized measurement method for testing BPL, and if so, how to develop it. It requested input on whether there are any international standards that should be investigated for possible adoption in order to facilitate the development of BPL products for a global marketplace. In addition, the Commission sought comments on issues related to the authorization of BPL and the types of components of Access BPL that would be subject to equipment authorization. Finally, the Commission sought input on whether power line carrier systems currently deployed by the utility companies to control and monitor the electrical system would be replaced in the future with the new high speed BPL equipment and on any associated issues with the coexistence of the older control systems with the new BPL systems. (See paragraphs 9 through 29 of the NPRM for full discussion).

8. As indicated in the *Notice of Inquiry* and supported by the responsive comments, we believe that Access BPL offers the promise of a new method for delivery of broadband services to residential, institutional, and commercial users. Because power lines reach virtually every home, school, and business in the United States, Access BPL technology could play an important role in providing high-speed Internet and broadband services to rural and remote areas of the country. Thus, significant areas of the country still lack broadband access and many others lack competition for such services, and we believe that Access BPL could serve as a means to reach those areas. Since Access BPL uses the same power lines that carry electricity virtually everywhere, much of the infrastructure needed to operate this technology is already in place, so that major savings in deployment costs and capital may be realized in its deployment. Access BPL could also serve to provide new competition to existing broadband services, such as cable and DSL. In addition, Access BPL may allow electric utilities to improve the safety and efficiency of the electric power distribution system and also further our national homeland security by protecting this vital element of the U.S. critical infrastructure. Moreover, Access BPL is being developed worldwide, and encouraging the deployment of the technology in the United States will support globalization of products and

services, promote continued U.S. leadership in broadband technology, and bring important benefits to the American public.

9. We recognize the significant concerns of existing radio users regarding the potential for harmful interference from Access BPL operations. After careful consideration, however, we believe that these interference concerns can be adequately addressed. We believe that Access BPL systems can operate successfully under the non-interference requirements of the part 15 rules. Under these rules, operators of Access BPL systems will be responsible for eliminating any harmful interference that may occur. Furthermore, we believe that the current part 15 emission limits for carrier current systems in conjunction with certain additional requirements specific to Access BPL operations will be adequate to ensure that existing radio operations are protected against harmful interference from such operations. We therefore are proposing changes to our part 15 rules that we believe will facilitate the deployment of Access BPL technology while protecting licensed users of the spectrum. Specifically, we are proposing to: (1) Define Access BPL for purposes of our rules; (2) maintain the existing part 15 emission limits for Access BPL; (3) require that Access BPL devices employ adaptive interference mitigation techniques; (4) require that Access BPL providers maintain a database of installation locations and technical information; and (5) adopt specific measurement guidelines for both Access BPL and other carrier current systems to ensure that measurements are made in a consistent manner and provide for repeatable results in determining compliance with our rules.

Definition of Access BPL

10. We propose to define Access BPL as a carrier current system operating on any electric power transmission lines owned, operated or controlled by an electrical power provider, as follows:

Access Broadband over power line (Access BPL): A carrier current system that transmits radio frequency energy by conduction over electric power lines owned, operated, or controlled by an electric service provider. The electric power lines may be aerial (overhead) or underground.

We believe that this definition is consistent with the concept of Access BPL and the current and planned deployment of this technology. We request comment on this definition of Access BPL. Interested parties are

invited to submit suggestions for alternative definitions. Such submissions should include a complete description of what would be included in the definition of Access BPL and why. We also request comment on whether there are entities that plan to own/operate Access BPL over the electric power lines but would not be electrical power providers or a subsidiary of the incumbent electric power provider.

Access BPL Emission Limits

11. Existing spectrum users are concerned that emissions from Access BPL systems and devices could adversely affect their operations. BPL proponents, on the other hand, suggest that any impact from Access BPL would be minimal and some argue that emission levels higher than the current part 15 limits would be acceptable and allow more cost-effective system implementations. At this time, the Commission believe that we should proceed cautiously. We recognize that unlicensed operations in the HF band presents a number of unique challenges given the propagation characteristics of this range of frequencies and the diversity of licensed users. Accordingly, in order to better ensure protection of existing radio services, we are proposing to continue to apply the existing part 15 emission limits for carrier current systems to Access BPL systems. While we agree that there is some potential for Access BPL to cause harmful interference to radio services, we also tentatively conclude that the likelihood of such harmful interference is low under the current limits and that where such interference does occur, there are remedies that the Access BPL operator can employ to eliminate such interference. On balance, we believe that the benefits of Access BPL for bringing broadband services to the public are sufficiently important and significant as to outweigh the potential for increased harmful interference that may arise. Furthermore, we are proposing to subject Access BPL operations to the existing part 15 radiated emission limits for carrier current systems. In addition, we are proposing that Access BPL devices include technical capabilities and administrative procedures to ensure that the potential for harmful interference is minimized and that any instances of harmful interference are quickly resolved.

12. To ensure that any effect of the power line is taken into consideration when testing for compliance with our part 15 rules, we are proposing to modify the measurement procedures for

Access BPL systems, as set forth in Appendix C of the NPRM, to specify that emission measurements be made at several specific distances from the Access BPL equipment source, and that measurements be taken parallel to the power line to find the maximum emissions from the BPL system. We seek comment on our proposed measurement guidelines.

13. With regard to potential interference to the non-amateur radio services, such as public safety, maritime and other operations, we believe that the risk of harmful interference from Access BPL operations is low. In general, we believe that a properly designed and operated BPL system will pose little interference hazard to non-amateur services such as aeronautical, maritime and public safety. However, we recognize in our analysis that public safety systems merit particular attention because of the often critical nature of their communications. In analyzing the potential for harmful interference to public safety systems we took into account the fact that low-level part 15 signals from Access BPL devices attenuate rapidly as the distance from the device increases; and that most public safety systems are designed so that mobile and portable units receive a signal level significantly above the noise floor. From an interference analysis standpoint, this latter characteristic distinguishes public safety systems from amateur radio stations using high-sensitivity receivers to receive signals from transmitters often thousands of miles away. However, it is foreseeable that under certain rare circumstances a public safety unit could: (a) operate in close proximity to an Access BPL device; (b) be tuned to a frequency radiated by the Access BPL device; and (c) be receiving a weak signal from a distant, or obstructed, public safety base station. In general, potential harmful interference under these conditions would be limited to public safety units operating on systems using low-band VHF channels (25–50 MHz). Therefore, it appears that the interference protections we propose herein—and the strict “no interference” restriction inherent in the part 15 rules—will be adequate to foreclose such rare instances of harmful interference to public safety systems. While we tentatively conclude that the measures proposed herein are adequate, we request comment on whether any additional measures are needed to protect particular operations, such as public safety. For example, should we require Access BPL system to coordinate with public safety agencies that use the

HF band for state-wide public safety communications?

14. We are proposing to maintain the existing part 15 radiated emission limits for Access BPL systems and devices. In addition, we are proposing to exempt Access BPL systems from the existing conducted emission limits of § 15.107(c). Because Access BPL systems are installed on power lines that can carry 1,000 volts to 40,000 volts, conducted emission measurements are very difficult to measure, and present safety hazards in connecting test equipment to these lines. We do not believe that this exemption would have any impact on interference potential since Access BPL would still be required to comply with our radiated emissions rules. We seek comment on these proposals. We further seek comment on whether Access BPL would in some instances operate in the AM broadcast band (from 535 to 1705 kHz), and whether specific conducted requirements are needed in such situations.

Access BPL Operational Requirements

15. To further address the interference concerns raised in the *Inquiry*, we are proposing certain additional technical and administrative requirements for Access BPL. First, we are proposing to require that Access BPL systems and devices incorporate capabilities that would allow the operator to modify system performance to mitigate or avoid harmful interference to radio services. Such adaptive interference mitigation techniques would include, for example, the capability to reduce power levels on a dynamic or remote controlled basis, and the ability to include or exclude specific operating frequencies or bands. This capability would allow operators to avoid localized and site-specific harmful interference.

16. We believe that this requirement is reasonable and practicable for Access BPL operators and equipment manufacturers to implement. We observe that a number of Access BPL devices currently employ OFDM modulation techniques, which facilitate the ability to dynamically select the specific frequencies used to provide service and to avoid use of specific frequencies where operation might result in harmful interference. In this regard, we note that PowerWAN states that "notching" of specific frequency is technically feasible. Ambient indicates that its equipment will be able to notch out individual frequencies "on the fly," in response to short term changes in the RF environment. Main.Net states that it already has the capability to remotely

control the operating frequencies and power of their installations.

17. Second, we propose to require that Access BPL devices incorporate a shut-down feature that would deactivate units found to cause harmful interference, and thereby allow speedy implementation of interference mitigation measures. It is our understanding that most Access BPL devices already possess this capability. We seek comment on these proposals and invite suggestions for alternative approaches. In particular, we request comment on whether we should have specific requirements regarding the above mitigation approaches. For example, should we require that each Access BPL device be capable of operating across a minimum range frequencies and have the capability to remotely exclude a specific percentage of frequencies within this range. We also seek comment on the cost and effectiveness of these or alternative approaches. To the extent possible, we encourage potential BPL providers and BPL equipment manufacturers to work with amateurs and other existing licensed services to develop such appropriate mitigation requirements. We seek comment on the appropriate period of time that we should allow for BPL systems to come into compliance with any new requirements that we may adopt pursuant to this rule making proceeding. We further seek comment on whether Access BPL systems currently deployed should be required to be brought into compliance with the new rules, and if so, what period of time should be afforded for them to come into compliance.

18. Finally, we propose to subject Access BPL systems to a notification requirement similar to the notification requirements in our rules for power line carrier (PLC) systems. Under this requirement, an Access BPL system operator would submit information on its system to an industry-operated entity. The objective of the proposed notification would be to establish a publicly accessible database for Access BPL information to ensure that the location of Access BPL systems and their operating characteristics are identified if harmful interference occurs and to facilitate interference mitigation and avoidance measures. We propose that this notification includes information on the location of the installation, the type of modulation used and the frequency bands of operation. We seek input on these proposals. We also request comment and suggestions on the appropriate industry-operated entity that we should select to receive the notifications and

maintain the Access BPL data base. We also seek comment on other approaches for making this information available. For example, would it more reasonable to allow each Access BPL operator to maintain a database of its own rather than require a more centralized data base? Commenting parties are requested to submit information on the benefits of such approaches. We further seek input on any resulting burdens that the proposed notification requirement may place on entities operating Access BPL systems, and any impact of a notification system on the availability of customer data as well as how any concerns regarding the proprietary nature of that data can be addressed.

Equipment Authorization and Measurement Guidelines

19. *Equipment Authorization.* We propose to retain the Verification procedure for Access BPL. Consistent with the objective that our regulatory requirements keep pace with technology development, we recognize that we must balance administrative burdens and the need to ensure compliance with our rules. We agree with commenting parties such as Phonex Broadband Corporation (Phonex) and UPLC that the authorization procedure for BPL should be the same as for all unintentional radiators, including traditional types of carrier current systems. Low-speed carrier current systems, which for a number of years have been operating inside buildings, have rarely been a source of harmful interference to radio communications, and the use of the verification procedure has been adequate to ensure that such systems comply with the rules. We seek comment on this proposal.

20. *Access BPL Measurement Guidelines.* Because Access BPL is a new implementation of carrier current techniques, there are no existing measurement guidelines for this type of equipment. We tentatively propose that Access BPL systems, including all BPL electronic devices, e.g., couplers, injectors, extractors, repeaters, boosters, concentrators installed on the electric utility overhead or underground medium voltage lines etc., be measured *in-situ* to demonstrate compliance with our part 15 rules, at a minimum of three overhead and three underground representative locations, using the measurement guidelines in Appendix C of the NPRM. Consistent with existing FCC measurement procedures, measurements below 30 MHz must be performed with a magnetic loop antenna, while those above 30 MHz are performed using an electric field sensing antenna. For Access BPL in

underground installations, the proposed guidelines employ the common principle of measuring radiated fields along a number of radials at a specified distance from the periphery of the pad-mounted above-ground transformer where the Access BPL equipment is located, to find the maximum emissions. For Access BPL installed on overhead lines, in order to take into account the effect of the long power line associated with the Access BPL equipment, our proposed guidelines specify measurements at fixed horizontal distances from the power line where the Access BPL source is installed. Thus, rather than finding the maximum emissions across a number of radials,—as currently performed for other part 15 emitters—the receive antenna is moved down-line, parallel to the power line, starting from the Access BPL equipment location, to find the maximum emissions. Down-line distances used in this sequence of measurements are specified in terms of wavelength of the Access BPL mid-band frequency. We seek comment on these guidelines.

21. In addition, we specifically solicit comments on the height of receive antennas used for radiated emissions measurements for Access BPL systems operating on overhead power lines and on the possible use of correction factors to account for antenna height. The proposed guidelines in Appendix C of the NPRM recommend a fixed *loop* antenna height at 1 meter and scanning the height of electric field sensing antennas from 1 to 4 meters. While these recommendations correspond to standard practice for other types of devices (especially when measured on a test site), these heights may not capture the maximum emissions from an overhead power line. In Appendix C of the NPRM, we address this issue by specifying that distance extrapolation for emission measurements on overhead lines be based on slant-range distance from the Access BPL location on the pole to the measuring antenna, rather than on horizontal distance.

22. However, this technique does not account for field strength reductions caused by ground effects. We seek comment on the following:

(a) Is it necessary to require that emission measurements be conducted at antenna heights greater than those proposed in Appendix C of the NPRM?

(b) Is it practical and safe to make *in-situ* emission measurements at antenna heights up to the height of an overhead medium voltage power line (typically 11 meters) when operating 10 meters from the power line? As an alternative to

requiring higher antenna heights, should we specify that measurements that are performed at heights significantly lower than the power line be subjected to a correction factor to estimate the maximum field strength that would have been observed at a higher measurement height? How should such a correction factor be determined?

23. *Measurement Guidelines for Other Carrier Current Systems.* In the *Inquiry*, the Commission observed that the International Electrotechnical Commission (IEC), International Special Committee on Radio Interference (CISPR) Subcommittee I on *Interference Relating To Multimedia Equipment*, Working Group 3 on *Emission from Information Technology Equipment* is developing conducted emission limits for new BPL technologies. We note however that this international work on a standardized measurement method for In-House BPL is still under way, including work on the definition of a line impedance stabilization network (LISN), associated injection methods, and conducted emission limits for systems using the power line port as a communication port. We tentatively propose in the interim, pending the completion of such work, to retain the three-installation radiated emissions method for In-House BPL and traditional CCS, using the measurement guidelines in Appendix C of the NPRM, which clarify principles used regarding *in-situ* test buildings, device installation location within a building, measurement distances from the building, measurement of emissions from overhead power feed lines to the building, and device operation. We seek comment on the measurement guidelines of Appendix C of the NPRM, for In-House BPL and CCS.

24. In conclusion, we believe that Access BPL has the potential to offer a number of significant benefits, such as (1) increasing the availability of broadband services to homes and businesses; (2) improving the competitiveness of the broadband services market; (3) improving the quality and reliability of electric power delivery; and, (4) advancing homeland security. We believe that our proposals contained herein to adopt new part 15 technical and administrative rules for Access BPL will help promote and foster the development of this new technology with its concomitant benefits while at the same time ensuring that existing licensed operations are protected from harmful interference. We further believe that our proposed measurement guidelines for Access BPL

and CCS will ensure that emission measurements for determining the compliance of these systems with FCC requirements are made in a consistent manner, and with repeatable results. We request comments on these conclusions and on all aspects of the proposals herein.

Initial Regulatory Flexibility Analysis

25. As required by the Regulatory Flexibility Act of 1980 as amended,¹ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rulemaking (“NPRM”). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided in paragraph 53 of the NPRM. The Commission will send a copy of this *NPRM*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the NPRM and IRFA (or summaries thereof) will be published in the **Federal Register**.³

A. Need for, and Objectives of, the Proposed Rules

26. A number of parties are currently operating Access BPL under our part 15 rules. Access BPL systems are new types of carrier current system that operate on an unlicensed basis under part 15. Access BPL systems use existing electrical power lines as a transmission medium to provide high-speed communications capabilities by coupling RF energy onto the power line. Because power lines reach virtually every community in the country, we believe that Access BPL could play an important role in providing additional competition in the offering of broadband infrastructure to the American home and consumers. In addition, BPL could bring Internet and high-speed broadband access to rural and underserved areas, which often are difficult to serve due to the high costs associated with upgrading existing infrastructure and interconnecting communication nodes with new technologies. We propose to amend part 15 of our rules to adopt new requirements and measurement guidelines for Access broadband over

¹ See 5 U.S.C. 603. The RFA, *see* 5 U.S.C. 601 *et. seq.* has been amended by the Contract With America Advancement Act of 1996, Public Law 104–112, 110 Stat. 847 (1996) (“CWAAA”). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (“SBREFA”).

² See 5 U.S.C. 603(a).

³ See 5 U.S.C. 603(a).

power line (BPL). Specifically, we propose new part 15 requirements for Access BPL to promote its growth while continuing to protect licensed spectrum users. We further propose to adopt new measurement guidelines for Access BPL, both in aerial (overhead) and underground configurations. For In-House BPL and traditional CCS, we propose to clarify the measurement guidelines to ensure that measurements are made in a consistent manner and provide for repeatable results in determining compliance with our rules. These actions will remove regulatory uncertainties, promote the deployment of BPL to bring the necessary competition in the provisioning of broadband applications to the American public as well as new high speed broadband access to underserved areas of the country, while ensuring that licensed users continue to be protected from harmful interference.

B. Legal Basis

27. This action is taken pursuant to sections 1, 4, 301, 302(a), 303, 307, 309, 316, 332, 334, and 336 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154, 301, 302(a), 303, 307, 309, 316, 332, 334, and 336.

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

28. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁴ The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small business concern" under Section 3 of the Small Business Act.⁵ Under the Small Business Act, a "small business concern" is one that: (1) Is independently owned and operated; (2) is not dominant in its field of operations; and (3) meets any additional criteria established by the Small Business Administration (SBA).⁶

29. A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."⁷ Nationwide, as of 1992, there were approximately 275,801 small organizations.⁸ The term "small

governmental jurisdiction" is defined as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."⁹ As of 1997, there were approximately 87,453 governmental jurisdictions in the United States.¹⁰ This number includes 39,044 counties, municipal governments, and townships, of which 27,546 have populations of fewer than 50,000 and 11,498 counties, municipal governments, and townships have populations of 50,000 or more. Thus, we estimate that the number of small governmental jurisdictions is approximately 75,955 or fewer.

30. The proposed rules pertain to manufacturers of unlicensed communications devices. The appropriate small business size standard is that which the SBA has established for radio and television broadcasting and wireless communications equipment manufacturing. This category encompasses entities that primarily manufacture radio, television, and wireless communications equipment.¹¹ Under this standard, firms are considered small if they have 750 or fewer employees.¹² Census Bureau data for 1997 indicate that, for that year, there were a total of 1,215 establishments¹³ in this category.¹⁴ Of those, there were 1,150 that had employment under 500, and an additional 37 that had employment of 500 to 999. The percentage of wireless equipment manufacturers in this category is approximately 61.35%,¹⁵ so the Commission estimates that the number of wireless equipment manufacturers with employment under 500 was actually closer to 706, with an additional 23 establishments having employment of between 500 and 999.

⁹ 5 U.S.C. 601(5).

¹⁰ 1995 Census of Governments, U.S. Census Bureau, United States Department of Commerce, Statistical Abstract of the United States (2000).

¹¹ NAICS code 334220.

¹² Id.

¹³ The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical locations for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 1997, which was 1,089.

¹⁴ U.S. Census Bureau, 1997 Economic Census, Industry Series: Manufacturing, "Industry Statistics by Employment Size," Table 4, NAICS code 334220 (issued August 1999).

¹⁵ Id. Table 5, "Industry Statistics by Industry and Primary Product Class Specialization: 1997."

Given the above, the Commission estimates that the great majority of wireless communications equipment manufacturers are small businesses. We do not believe this action would have a negative impact on small entities that manufacture unlicensed BPL devices. Indeed, we believe the actions should benefit small entities because it should make available increased business opportunities to small entities. We request comment on these assessments.

D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

31. Part 15 carrier current devices are already required to be authorized under the verification procedure as a prerequisite to marketing and importation. The reporting and recordkeeping requirements associated with the equipment authorization procedures would not be changed by the proposals contained in this Notice.

32. We propose to adopt new requirements for Access BPL to ensure protection of licensed spectrum users from harmful interference. These requirements include the proposed technical requirement for adaptive interference mitigation capabilities and the proposed notification of Access BPL systems in a database similar to the one required for existing Power Line Carrier systems. Although these proposals do somewhat increase the reporting and record keeping requirements for Access BPL systems, the benefit of ensuring protection to critical systems operated by law enforcement groups, government users and emergency operations outweighs this small cost that will permit the growth of Access BPL in the shared spectrum.

E. Steps Taken To Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered

33. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁶

¹⁶ 5 U.S.C. 603(c).

⁴ See U.S.C. 603(b)(3).

⁵ Id. 601(3).

⁶ Id. 632.

⁷ 5 U.S.C. 601(4).

⁸ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

34. In this NPRM, we have maintained the existing part 15 emission limits, which are applicable to all part 15 devices, including BPL. We have also maintained the verification method for equipment authorization of BPL, which is the least burdensome equipment authorization procedure, wherein the manufacturer conducts his own testing and retains the compliant test data in his file. We have proposed to adopt new measurement guidelines for BPL and existing carrier current systems, to assist manufacturers and testing entities to follow clearer and more precise measurement procedures in the testing of BPL and CCS.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

35. None.

Ordering Clauses

36. Pursuant to sections 1, 4, 301, 302(a), 303, 307, 309, 316, and 332 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154, 301, 302(a), 303, 307, 309, 316, 332, 334, and 336, the Notice of Proposed Rule Making is hereby adopted.

37. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of this Notice of Proposed Rule Making, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in Part 15

Communications equipment, Radio, Reporting and recordkeeping.

Federal Communications Commission.

Marlene H. Dortch,
Secretary.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR part 15 as follows:

PART 15—RADIO FREQUENCY DEVICES

1. The authority citation for part 15 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, 304, 307, 336, and 544a.'

2. Section 15.3 is amended by adding paragraph (ff) to read as follows:

§ 15.3 Definitions.

(ff) *Access Broadband over power line (Access BPL):* A carrier current system that transmits radio frequency energy by conduction over electric power lines

owned, operated, or controlled by an electric service provider. The electric power lines may be aerial (overhead) or underground.

3. Section 15.107 is amended by adding paragraph (e) to read as follows:

§ 15.107 Conducted limits.

(e) The limits shown in paragraphs (a) and (b) of this section shall not apply to Access BPL systems.

4. Section 15.109 is amended by revising paragraph (e), redesignating paragraphs (f), (g) and (h) as paragraphs (h), (i) and (j), and by adding new paragraphs (f) and (g) to read as follows:

§ 15.109 Radiated emission limits.

(e) Carrier current systems, including BPL systems, used as unintentional radiators or other unintentional radiators that are designed to conduct their radio frequency emissions via connecting wires or cables and that operate in the frequency range of 9 kHz to 30 MHz, including devices that deliver the radio frequency energy to transducers, such as ultrasonic devices not covered under part 18 of this chapter, shall comply with the radiated emission limits for intentional radiators provided in § 15.209 for the frequency range of 9 kHz to 30 MHz. As an alternative, carrier current systems used as unintentional radiators and operating in the frequency range of 525 kHz to 1705 kHz may comply with the radiated emission limits provided in § 15.221(a). At frequencies above 30 MHz, the limits in paragraphs (a), (b) or (i) of this section, as appropriate, continue to apply. For all BPL systems, the requirements of this paragraph (e) and paragraph (a) of this section shall also apply to the emissions from all low-voltage lines from the distribution transformer to all in-building wiring.

(f) Access BPL systems shall incorporate adaptive interference mitigation techniques such as dynamic or remote reduction in power and adjustment in operating frequencies, in order for Access BPL installations to avoid site-specific, localized use of the same spectrum by licensed services. Access BPL systems shall incorporate a shut-down feature to deactivate units found to cause harmful interference.

(g) Entities operating Access Broadband over Power Line systems shall supply to a Federal Communications Commission/National Telecommunications and Information Administration recognized industry-operated entity, information on all existing, changes to existing and proposed Access BPL systems for

inclusion in a data base. Such information shall include the installation locations, frequency bands of operation, and type of modulation used. No notification to the FCC is required.

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[FR Doc. 04-5271 Filed 3-16-04; 8:45 am]

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[DA 04-366; MB Docket No. 04-34, RM-10848]

Radio Broadcasting Services; Joliet and Lemont, IL

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: The Audio Division requests comments on a petition for rule making filed by HBC License Corporation proposing the reallocation of Channel 228A from Joliet to Lemont, Illinois, and the modification of Station WVIX(FM)'s construction permit accordingly. Channel 228A can be reallocated to Lemont in compliance with the Commission's minimum distance separation requirements with a site restriction of 7.0 kilometers (4.4 miles) south at Station WVIX(FM)'s authorized construction permit site. The coordinates for Channel 228A at Lemont are 41-36-39 North Latitude and 88-00-33 West Longitude. In accordance with Section 1.420(i) of the Commission's Rules, we will not accept competing expressions of interest for the use of Channel 228A at Lemont, Illinois, or require petitioner to provide an equivalent class channel for the use of other interested parties.

DATES: Comments must be filed on or before April 26, 2004, reply comments on or before May 11, 2004.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, or its counsel or consultant, as follows: Lawrence N. Cohn, Esq., Cohn and Marks, LLP, 1920 N Street, NW., Suite 300, Washington, DC 20036 (Counsel for Petitioner).

FOR FURTHER INFORMATION CONTACT: Sharon P. McDonald, Media Bureau, (202) 418-2180.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Notice of Proposed Rule Making, MB Docket No. 04-34, adopted March 3, 2004, and