



**Driving the Development Of  
Broadband Over Power Line  
Solutions for Utilities & Their Partners**



**The Telecommunications and Information  
Technology Association for Utility, Energy  
And Other Critical Infrastructure  
Organizations in Canada**

November 28, 2005

Dr. Robert McCaughern  
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Re: UPLC/UTC Canada Comments in Response to Canada Gazette Notice SMSE-005-05 dated  
2005-07-30 Consultation Paper on Broadband over Power Line (BPL) Communication Systems

Dear Dr. McCaughern:

Attached are the comments of UTC Canada and the United Power Line Council in response to the Canada Gazette notice in the above-referenced proceeding. Both UTC Canada and UPLC applaud Industry Canada for its leadership in publishing the Consultation Paper on BPL. We feel that there is tremendous opportunity to promote the deployment of BPL in Canada, while at the same time, protecting radio communications from harmful interference.

Best regards,

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## TABLE OF CONTENTS

<b>SUMMARY .....</b>	<b>2</b>
<b>I. Introduction .....</b>	<b>4</b>
<b>II. General Comments .....</b>	<b>5</b>
<b>III. Definition of Access BPL and In-Home BPL Systems .....</b>	<b>7</b>
<b>IV. Equipment Standard and Approval Process .....</b>	<b>7</b>
<b>V. Prospective Technical Requirements .....</b>	<b>9</b>
<b>(a) Emission Limits .....</b>	<b>10</b>
<b>(b) Interference Mitigation Requirements for Access BPL Systems .....</b>	<b>12</b>
<b>VI. Access BPL Operational Requirements .....</b>	<b>13</b>
<b>(a) Prohibited Frequency Bands .....</b>	<b>15</b>
<b>(b) Geographical Frequency Restrictions and Coordination Requirements .....</b>	<b>16</b>
<b>(c) Interference Resolution .....</b>	<b>17</b>
<b>VII. Conclusion .....</b>	<b>19</b>

## **SUMMARY**

UPLC and UTC Canada applaud Industry Canada for its initiative in publishing the Consultation Paper on BPL, and support rules that harmonize BPL operations in Canada and the U.S. Specifically, UPLC and UTC Canada support the proposed rules which are consistent with the U.S. rules for equipment authorization, emission limits, interference mitigation, and general operational requirements for BPL operations. UPLC and UTC Canada believe that these rules strike an appropriate balance between promoting the deployment of BPL and protecting authorized radiocommunications services from harmful interference.

## **COMMENTS OF THE UNITED POWER LINE COUNCIL AND UTC CANADA**

In response to the Canada Gazette Notice SMSE-005-05 dated 2005-07-30, the United Power Line Council (“UPLC”) and UTC Canada are pleased to provide their comments on the Consultation Paper on BPL.<sup>1</sup> UPLC and UTC Canada applaud Industry Canada for its initiative in publishing the Consultation Paper on BPL and generally support its proposals, which are intended to harmonize the technical rules in Canada with those recently adopted in the United States. As such, we have made a number of references to the Federal Communications Commission’s (FCC) approach to how it is handling BPL. We have drawn these analogies and comparisons simply to promote and support the harmonization of operating standards between Industry Canada and the FCC.

While UPLC and UTC Canada believe that the proposed rules take a conservative approach towards BPL given its low potential for interference, at this stage the rules strike an appropriate balance between the interest in promoting BPL and the interest in protecting authorized radiocommunications from harmful interference. UPLC and UTC Canada believe that Industry Canada should revisit these rules from time-to-time to determine if the safeguards proposed in the Consultation Paper on BPL are still appropriate.

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<sup>1</sup> Consultation Paper on Broadband over Power Line Communications Systems, SMSE-005-05, July, 2005. at <http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf08434e.html> (hereinafter “Consultation Paper on BPL”).

## I. Introduction

The UPLC is an alliance of utilities and their technology and service provider partners to develop broadband over power line (BPL) solutions in North America. Its members include virtually every utility and technology company that is actively engaged in the development of BPL in the U.S. and Canada.<sup>2</sup> It was created by and is an affiliate of the United Telecom Council, which is the international trade association for the telecommunications and information technology interests of utilities and other critical infrastructure industries. Many of the members of UPLC have deployed BPL systems in various trials to determine its technical and economic viability. Some have deployed BPL on a commercial basis, but only very recently and in limited numbers.<sup>3</sup> These trials and commercial deployments have yielded encouraging results, and the UPLC is optimistic about the future of BPL.

UTC Canada is a trade association focused on addressing the critical telecommunications issues for utilities and energy companies in Canada and the providers of telecommunications infrastructure or information technology services. UTC Canada was created by and is an affiliate of UTC. UTC Canada advocates for the telecom subsidiaries (utelcos) of parent utilities, and the IT interests of all Canadian electric, gas and water utilities, and oil and gas pipelines, both publicly and privately owned. UTC Canada has advocated in a variety of proceedings before Industry

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<sup>2</sup> The members of the UPLC are listed on the UPLC website at [www.uplc.org](http://www.uplc.org).

<sup>3</sup> There are over 40 BPL deployments in North America alone. See BPL map at [www.uplc.org](http://www.uplc.org).

Canada and is pleased to comment jointly with the UPLC in response to the Consultation Paper on BPL.

## **II. General Comments**

Broadband over power line represents a valuable technology that will help to fill the gaps in the availability of commercial broadband services, provide increased competition for access and data services, and finally provide an important but often understated function in improving electric utility operations and enhancing the delivery of electricity. As a reliable electricity supply is important to every Canadian, we feel that regulatory oversight should not apply to BPL applications involving internal utility applications, nor should the BPL system be subject to access requirements. Similarly for the instances in which BPL is used for commercial telecom applications and services through a BPL operator, we submit that the telecommunications services, applications and associated supporting network infrastructure should be forborne from CRTC regulation for operators that are, or fit in the category of a non-dominant carrier.

We support Industry Canada's efforts in adopting technical rules that are harmonized with those adopted by the FCC within the United States. This Consultation Paper on BPL marks an important step towards promoting the successful and harmonious deployment of BPL in Canada. The Federal Communications Commission recently established technical and operational rules for BPL systems, and because of the similarities between the U.S. and Canadian distribution systems, Industry Canada concluded that, "BPL manufacturers will view Canada and the U.S. as a common

marketplace.”<sup>4</sup> In that regard, “Industry Canada believes that technical harmonization with the U.S. is an important step towards facilitating the deployment of BPL technologies.”<sup>5</sup>

BPL technology continues to develop and one of the key issues to its mass market commercial deployment will be promoting economies of scale and scope for BPL equipment. These improved economies will increase the availability of equipment and reduce its cost. To the extent that the technical rules in Canada are consistent with those in the United States, naturally greater economies of scale are possible. As Industry Canada has recognized, BPL brings many benefits, including promoting broadband access and competition, as well as electric reliability and efficiency.<sup>6</sup> As such, promoting BPL would demonstrably serve the public interest.

In addition, the FCC has concluded that the potential of harmful interference from BPL is low and can be effectively managed through the use of interference mitigation techniques, such as frequency shifting or frequency notching.<sup>7</sup> As such, harmonizing the rules with the U.S. would effectively protect authorized radiocommunications systems from harmful interference.

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<sup>4</sup> *Consultation Paper at 2, citing Amendment of Part 15 Regarding New Requirements and Measurements for Access Broadband over Power Line Systems and Carrier Current Systems*, Report and Order, ET Docket No. 04-37, 19 FCC Rcd. 21,265 (2004).

<sup>5</sup> *Consultation Paper on BPL* at 9-10.

<sup>6</sup> *Id.* at 6-7.

<sup>7</sup> *See Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband over Power Line Systems*, Report and Order, ET Docket No. 04-37, 19 FCC Rcd. 21265 at ¶¶23-24 (2004) (hereinafter “BPL Report and Order”). Frequency shifting refers to changing the carrier frequencies of the BPL signal to avoid frequencies that are in use by authorized radiocommunications services. Frequency notching refers to reducing the power of operation in a given channel.

### III. Definition of Access BPL and In-Home BPL Systems

UPLC and UTC Canada support the proposed definitions for both Access BPL and In-Home BPL systems with only slight revisions, which are underlined below.

**Access Broadband over Power Line (Access BPL):** A carrier current system installed and operated on an electric utility service as an unintentional radiator that sends radio frequency energy on frequencies between 1.705 MHz and 80 MHz over medium-voltage lines or over low-voltage lines to provide broadband communications and is located on the supply side of the utility service's points of interconnection with customer premises. Access BPL does not include power line carrier systems or in-house BPL systems, as defined elsewhere in the rules.

**In-house broadband over power line (in-house BPL):** a carrier current system, operating as an unintentional radiator, which sends radio frequency energy to provide broadband communications on frequencies between 1.705 and 80 MHz by conduction over electric power lines that are not owned, operated or controlled by an electric service provider. The electric power lines may be aerial (overhead), underground, or inside the walls, floors or ceilings of user premises. In-house BPL devices may establish closed networks within a user's premises or provide connections to Access BPL networks, or both.

These slight revisions are necessary to narrowly tailor the definitions. Otherwise, certain legacy systems, such as low-speed power line carrier systems for example, could be inadvertently swept up by the rules that apply to Access BPL.<sup>8</sup>

### IV. Equipment Standard and Approval Process

Industry Canada is considering the development of a new Interference Causing Equipment Standard (ICES) for Access BPL equipment, and has proposed that the

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<sup>8</sup> Note also that the proposed definition of in-house BPL, could also have inadvertently included baby monitors, which also "send radio frequency energy by conduction over electric power lines that are not owned, operated or controlled by an electric service provider."

certification process be used for Access BPL equipment.<sup>9</sup> We feel that the Department's proposal for defining equipment standards that manufacturers must meet is reasonable. Certification is supported as it assures that a manufacturer's products meet standards and reduces the risks associated with an *Access BPL* implementation which may involve substantial investment in labour and equipment. Certification also demonstrates to industry and the public a commitment to managing interference in a visible and verifiable manner.

Similarly, the FCC also decided to require that Access BPL equipment pass a certification process for authorization, but it decided to retain the verification procedure for in-house BPL systems.<sup>10</sup> The FCC simply explained that certification was appropriate for Access BPL systems as a temporary measure, "until additional operational expertise is obtained from its widespread deployment."<sup>11</sup> Conversely, it explained that verification for in-house BPL systems was appropriate because it has been "adequate to ensure that other types of carrier current systems comply with the Part 15 rules."<sup>12</sup> Importantly, the FCC grandfathered existing access BPL equipment and provided an 18-month transition period for new equipment to come into compliance with the certification requirements.<sup>13</sup> Overall the FCC took a fairly pragmatic approach, avoiding disruption to existing Access BPL systems that were not causing harmful

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<sup>9</sup> Consultation Paper on BPL at 9.

<sup>10</sup> BPL Report and Order at ¶¶124, 125.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at ¶ 130.

interference and providing a migration path for manufacturers to produce new equipment that would meet certification requirements.

UPLC and UTC Canada believe that certification of BPL equipment in Canada would also be appropriate, provided that it is a temporary measure and that there is a transition period to allow BPL deployment to continue while manufacturers produce new equipment that is capable of meeting any new requirements that Industry Canada may adopt. UPLC and UTC Canada applaud Industry Canada for its efforts to monitor international developments with regard to BPL, and recommend that Industry Canada re-examine the certification requirements, as the U.S. and other countries do the same later.<sup>14</sup> UPLC and UTC Canada also urge Industry Canada to grandfather existing BPL equipment and to allow the industry a reasonable transition period to bring new equipment into compliance with the certification requirements. The transition period should extend at least as long as the transition period in the U.S., if not longer. Here again, Industry Canada should continue to monitor international developments, because it is possible that the FCC may further extend the transition period.<sup>15</sup>

## **V. Prospective Technical Requirements**

Industry Canada has proposed that BPL comply with the same emission limits and incorporate interference mitigation capabilities similar to those adopted by the FCC. In the BPL Report and Order, the FCC explained that,

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<sup>14</sup> See Consultation Paper on BPL at 7-8 (reporting on international activities). Note that the FCC indicated that certification was only a temporary measure for Access BPL systems, until more experience was gained with BPL operations in the field.

<sup>15</sup> Pending Petitions for Reconsideration ask the FCC to extend the transition period for marketing and installation of BPL equipment for another 18 months to allow equipment manufacturers a reasonable period to sell inventoried equipment that complies with the new rules. See Petition for Reconsideration of Current Technologies in ET Docket No. 04-37, and Petition for Reconsideration of the UPLC in ET Docket No. 04-37, filed February 7, 2005.

[t]he effect of these [emission] limits will be to constrain the harmful interference potential of these systems to relatively short distances from the power lines that they occupy. In fact, in most cases the level of emissions from Access BPL systems will be at or close to the noise floor at distances beyond a hundred meters of an installed power line.<sup>16</sup>

Even with these limits, the FCC recognized that there was a possibility of harmful interference to nearby radio operations in the same band as BPL, but it concluded that “those situations can be addressed through interference avoidance techniques by the Access BPL provider such as frequency band selection, notching, or judicious device placement. . .”<sup>17</sup>

UPLC and UTC Canada believe that these conclusions are equally applicable to BPL operations in Canada, and urge Industry Canada to adopt similar requirements as part of its effort to harmonize its rules with the U.S. UPLC and UTC Canada also advise Industry Canada to adopt the extrapolation factor for measuring emissions at distances other than those specified in the rules, as explained more fully below.

#### **(a) Emission Limits**

UPLC and UTC Canada agree with the proposed emission limits.<sup>18</sup> These limits are appropriate because 1) they have proven very effective at controlling interference from BPL systems; 2) emissions from Access BPL systems tend to dissipate after a

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<sup>16</sup> BPL Report and Order at ¶38.

<sup>17</sup> *Id.*

<sup>18</sup> Access BPL systems operating below 30 MHz will be subject to emission limits of 30 microvolts/meter at a measurement distance of 30 meters. Access BPL systems operating between 30 MHz and 80 MHz will be subject to emission limits of 90 microvolts/meter at a measurement distance of 10 meters.

short distance from a coupler along a line and also degrade rapidly with distance perpendicular from the line; and 3) Access BPL devices on medium voltage lines are not marketed to the general public and operate on the medium voltage lines as commercial facilities.<sup>19</sup> These conclusions are consistent with findings in field trials. There have been only a few legitimate cases of harmful interference, which has been mitigated effectively by various techniques.<sup>20</sup> As such, UPLC and UTC Canada respectfully recommend that Industry Canada adopt the proposed emission limits, which have proven effective in reducing the potential of interference to low levels.<sup>21</sup>

It is also important that Industry Canada adopt the same extrapolation factor as the FCC for measuring emissions at distances other than those prescribed under the emission limits.<sup>22</sup> First, as a practical matter it is often difficult to take measurements at the exact distances prescribed by the emission limits. These measurements must be taken in the field where it is often impractical or hazardous to take the measurements at

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<sup>19</sup> See BPL Report and Order at ¶¶ 39, 43.

<sup>20</sup> Although Amateur operators have complained about harmful interference at several BPL deployments, these complaints have generally involved interference to mobile operations. In one case, the FCC conducted its own investigation of the complaints, and found that the mitigation techniques used by the BPL system were effective and that there was no harmful interference. See Letter from Bruce Franca to [ ]. Also, the ARRL has recently conceded that “[s]everal BPL system designs and implementations have demonstrated that it is technically and economically feasible to implement BPL without causing harmful interference to Amateur Radio operations.” See Petition for Issuance of Further Notice of Proposed Rule Making and for Amendment of Regulations by ARRL, the National Association for Amateur Radio in ET Docket No. 04-37, filed October 18, 2005. The UPLC has opposed this petition on other grounds, but appreciates that the ARRL has finally recognized that at least some BPL systems are benign.

<sup>21</sup> The UPLC believes that actual experience in field trials has proven more accurate at assessing the interference potential than computer modeling. In fact, the FCC rejected technical studies submitted by ARRL. See BPL Report and Order at ¶ 41.

<sup>22</sup> The FCC rules allow using a 20 dB per decade distance extrapolation factor for frequencies above 30 MHz and 40 dB per decade distance extrapolation for frequencies below 30 MHz. Thus, if the FCC rules specify a radiated emission limit of 100µV/m at 10 meters, if the measurement was made at 3 meters for a frequency of 20 MHz, a correction factor of 20.9 dB ( $40 \log(10/3)$ ) would be subtracted from the measurement data to account for the difference in measurement distances. See 47 C.F.R. § 15.31(f)(1) and (2).

the prescribed distances. Second, as a technical matter the extrapolation factor used by the FCC is appropriate because it is consistent with the rapid decay of BPL emissions seen in field trials, and it has been used in a number of field trials for an extended period of time with few if any instances of harmful interference from BPL operations generally. As such, the extrapolation factor used by the FCC is a useful and effective tool for demonstrating compliance with the emission limits and UTC Canada and the UPLC respectfully request that Industry Canada harmonize its technical rules for BPL by adopting it as well in Canada.

### **(b) Interference Mitigation Requirements for Access BPL Systems**

UPLC and UTC Canada also conditionally support the proposal to require that Access BPL equipment/systems incorporate adaptive interference mitigation techniques to minimize the potential for interference to radiocommunications users.<sup>23</sup>

Specifically, Industry Canada includes remote controllable shut down features; remote power reduction; and notch filtering and/or frequency avoidance among the capabilities that should be incorporated into the equipment.<sup>24</sup> Many of these capabilities would be consistent with those required by the FCC, and are reasonable to the extent that Industry Canada provides a transition period for manufacturers to produce new equipment that incorporates these capabilities, similar to the transition period adopted by the FCC.<sup>25</sup> UPLC and UTC Canada also urge Industry Canada to grandfather non-interfering existing equipment from these requirements, as the FCC

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<sup>23</sup> See Consultation Paper on BPL at 10-11.

<sup>24</sup> *Id.*

<sup>25</sup> See also Section III, *supra* (discussing equipment authorization transition period for certifying BPL equipment).

has done.<sup>26</sup> This will avoid unnecessary disruption of existing BPL systems, preserve investment, and still protect against harmful interference. As such, UPLC and UTC Canada support the reasonable implementation of appropriate interference mitigation capabilities, which will promote BPL deployment by facilitating effective resolution of harmful interference in the unlikely event that it occurs.

We feel that Interference mitigation techniques such as remote notch filtering or frequency avoidance, where appropriate or required within equipment and systems in the 1.705 to 80 MHz frequency range are reasonable. However, we do not support the proposed use of remote power reduction or remote shut down as mitigation methods. Notch filtering if properly applied with adequate suppression of emissions in a given spectrum should be the primary method. The use of remote power reduction and remote control shut down features cannot be tolerated in the operation of a system for more than a brief period. Internal utility or external telecommunications customers will not tolerate the interruption of service. The system must be designed for plug and play installation with very little customization required. Remote power reduction should be used to set an acceptable level of operational performance at minimum output power and then left. This would reduce the probability of interference to low levels generally, and the limited potential remaining risk could be effectively addressed through notch filtering or frequency avoidance. The availability of remote notch filtering or frequency avoidance precludes the need for any other interference mitigation technique.

## **VI. Access BPL Operational Requirements**

Industry Canada has proposed certain operational requirements to safeguard further against the potential of interference from BPL operations. These proposed operational requirements are similar to those adopted by the FCC.

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<sup>26</sup> Industry Canada should grant BPL operators the discretion to use a variety of mitigation techniques to resolve interference, rather than to prescribe a one-size-fits-all solution that may not be appropriate in all circumstances and which may unnecessarily impair the performance of BPL systems.

First, the FCC extended additional protections to a limited class of critical Federal Government operations and public safety radio services on a geographic or nationwide basis.<sup>27</sup> In doing so, the FCC explained that these operations and services merited additional protections, whereas others did not, because of the magnitude of the risk rather than any greater potential of interference to these Federal operations or public safety radio services.<sup>28</sup> These special protections were narrowly tailored to specific geographic areas and certain types of BPL installations to minimize the impact on the development of BPL.<sup>29</sup>

Second, the FCC established certain administrative requirements intended to facilitate the informal resolution of harmful interference. It established a centralized, publicly-accessible Access BPL database which includes basic information about BPL deployments. In the event that radio users experience harmful interference and suspects that it is caused by BPL operations, they can refer to the Access BPL database to determine if there is a deployment nearby and if so, they must contact the BPL operator first to attempt to resolve the interference before they may take a complaint to the FCC.<sup>30</sup>

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<sup>27</sup> See BPL Report and Order at ¶¶49-53.

<sup>28</sup> *Id.* at ¶¶ 48-51 (declining to establish Access BPL-free zones around airports, military bases, hospitals, police and fire stations; or to extend special protections to amateur radio operations). In fact, the Commission actually found that the potential for interference to public safety radio services was relatively low, but nonetheless required BPL operators to consult with local public safety radio services before deploying because of the relative importance of public safety communications.

<sup>29</sup> Generally, it narrowly tailored protections to Federal government operations, such that certain operations are only protected within a radius of a mile or two, depending on whether the BPL installations use overhead or underground power lines. Similarly, the nationwide prohibition on the use of certain frequencies only applies to overhead, rather than underground BPL installations, reflecting the lower potential of interference from underground BPL installations. See 47 C.F.R. §15.615(f)(2).

<sup>30</sup> See 47 C.F.R. §15.615.

## **(a) Prohibited Frequency Bands**

UPLC and UTC Canada respectfully recommend that Industry Canada narrowly tailor any prohibited frequency bands for BPL, to the extent that any are imposed. The effect of such restrictions could dramatically diminish the performance of BPL, however we need strike a reasonable balance between BPL performance and the public good of preserving important and critical frequency bands.

We support the prohibition of *Access BPL* from operating in the aeronautical services, public safety and national defence frequency bands assigned in the 1.705 to 80 MHz frequency range. As the potential operators such a BPL systems, we understand the need to protect safety related services; however, we also do not want to undergo an extensive consultation process with every possible spectrum user and have to continuously adjust our systems to conform with the mobility of the spectrum user. Our preference would to deploy a system using a standard suppression mask, with national and perhaps regional or local interests of special need.

Even with advanced modulation schemes that enable BPL to notch out specific frequencies, notching may also impact the white space between frequencies as a practical matter too, thus reducing the available bandwidth to a greater degree than just by notching the specific frequency. Moreover, underground BPL installations inherently present less of a threat of interference than overhead; and certain frequencies are ideal for underground installations. Therefore to the extent that Industry Canada does prohibit BPL on certain frequencies, UPLC and UTC Canada urge Industry Canada to

exempt underground installations from such blanket bans, and to carefully consider the impact on BPL performance as it chooses which frequencies to ban.<sup>31</sup>

### **(b) Geographical Frequency Restrictions and Coordination Requirements**

UPLC and UTC Canada also recommend narrowly tailoring geographic restrictions, if any, on BPL. Geographic restrictions are certainly preferable to blanket bans, but may effectively prohibit the deployment of BPL deployment if the restrictions are overbroad in geographic scope or over-inclusive in bandwidth. Thus to the extent that Industry Canada does impose geographic restrictions, UPLC and UTC Canada suggest that it limit the radius around protected facilities to the same extent as the FCC rules do, and that it also compensate for whether the BPL installation is overhead or underground,. Obviously, the determination as to which facilities to protect is one that Industry Canada must make itself, but again, UPLC and UTC Canada respectfully request that it exercise restraint in doing so, considering the impact that such restrictions would have on the widespread deployment of BPL and its performance, as well.

There should be no geographic restrictions placed on the use of *Access BPL* systems, except for scientific (radio astronomy, etc) and others that are officially registered with the Department as being of national or international significance. Only the Department can determine some of these. Notch filtering and frequency avoidance as identified as suitable interference mitigation methods coupled with prohibition of

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<sup>31</sup> Note that in the U.S., initially the Federal government recommended banning BPL on 5.4% of the total frequencies in the 1.7-80 MHz band. See U.S. Department of Commerce, Potential Interference from Broadband over Power Line (BPL) Systems to Federal Government Radiocommunications at 1.7-80 MHz, Phase 1 Study Volume I (filed Apr. 27, 2004)(“NTIA Phase 1 Study”). Subsequently, it reduced that blanket ban by half to 2.18% of the total frequencies in the 1.7-80 MHz band and exempted underground installations, after reconsidering the real risk of interference from BPL and the impact such bans would have on BPL deployment. See Letter from Frederick R. Wentland, Associate Administrator, Office of Spectrum Management, to Edmond J. Thomas, Chief, Office of Engineering and Technology in ET Docket No. 04-37, filed Sept.22,2004.

operations on aeronautical service, public safety and military frequencies should be sufficient to mitigate interference issues.

To the extent that Industry Canada extends special protections, they should take the form of consultation rather than coordination, and should extend only to communications services that are truly public safety or are otherwise critical government facilities. Coordination of BPL facilities would involve more formal procedures, and could result in a de facto ban on deployment, if authorized radiocommunications are given an effective veto against BPL. Meanwhile, consultation provides effective notice about plans for BPL deployment so that the parties can collaborate on network design to avoid the potential for harmful interference. Limiting the class of services with which BPL must consult also reduces potential delay and costs in deployment. Moreover, limiting the class to public safety and critical government communications services appropriately balances the importance of protecting certain communications services against the public interest in the deployment of BPL. Finally, if Industry Canada does require BPL operators to consult in advance of deployment, UPLC and UTC Canada recommend that Industry Canada only require consultation within 30 days of actual BPL operation, as is the case under the FCC rules.<sup>32</sup>

### **(c) Interference Resolution**

UPLC and UTC Canada fully support Industry Canada's proposal to require individuals and organizations with complaints to directly contact Access BPL operators to investigate and resolve problems. That would facilitate the effective resolution of legitimate complaints and discourage the filing of frivolous complaints. BPL operators should respond to interference complaints within a reasonable time period according to a mutually acceptable schedule, after the receipt of an interference complaint **conditional upon** verification through a publicly accessible database that enables complainants to verify that BPL exists at a given location or confirm that a utility does indeed operate BPL equipment or systems. Upon verification, the BPL operator should

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<sup>32</sup> See e.g. 47 C.F.R. §15.615(e).

promptly respond to interference complaints from public safety communications services, specifically. Conversely, individuals and organizations should be required to act in good faith, and warned that they may be sanctioned for filing complaints frivolously or precipitously.<sup>33</sup> There have been documented instances in which utilities have received complaints regarding interference from BPL systems where the utility had not been running a BPL network.

In order to facilitate the informal resolution of harmful interference from BPL operations, UPLC and UTC Canada support the proposal to establish a publicly accessible database via the internet that includes basic information about BPL deployments including:

- a. Name of the Access BPL provider,
- b. Frequencies of the Access BPL operation;
- c. Postal code(s) served by the specific Access BPL operation,
- d. Manufacturer and type of Access BPL equipment being deployed,
- e. Point of contact information (both telephone and e-mail address) for interference inquiries & resolution, and
- f. Proposed/or actual date of Access BPL operation (no more than 30 days in advance of an actual deployment)

As noted above, the FCC established such an Access BPL database, which recently went into effect. The United Telecom Council is the manager of the Access BPL database, and has designed the database to comply with the FCC rules in an easy to use format for the public at large. This database is designed in such a way that it could also serve as the database for Canadian BPL deployments, as well. In addition, UTC already is the manager of a similar database that utilities use to coordinate power line carrier systems with Federal government operations. This experience helped to qualify it to manage the Access BPL database for U.S. deployments. Finally, as a matter of administrative efficiency and public convenience, it would make sense for UTC to serve as the database manager for Canadian deployments, using the same database as for the U.S. deployments. Therefore, UPLC and UTC Canada respectfully

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<sup>33</sup> See *BPL Report and Order* at ¶87 (warning that if the Commission investigates an interference complaint and finds that it is frivolous, it will impose appropriate sanctions for abuse of its administrative process).

recommend that Industry Canada appoint UTC to serve as the database manager for the Access BPL database for Canadian deployments.

## **VII. Conclusion**

Overall, UPLC and UTC Canada generally support the proposals within the Consultation Paper on BPL, which should promote the deployment of BPL while protecting authorized radiocommunications services from harmful interference. UPLC and UTC Canada believe that harmonizing the rules with those recently adopted in the U.S. will remove potential regulatory barriers to entry in Canada and facilitate the widespread deployment of BPL by promoting economies of scale and scope that will reduce costs and promote mass market production of equipment while enabling BPL based utility applications and commercial broadband services. The safeguards to protect authorized radiocommunications services proposed by Industry Canada are conservative, and should be revisited to determine whether they are still appropriate after more experience is gained from BPL deployments in the field. Similarly, UPLC and UTC Canada believe that Industry Canada should continue to monitor international developments in order to adjust its rules to remain consistent with any revisions to the U.S. rules, including the equipment authorization requirements and the interference mitigation capabilities.

**WHEREFORE, THE PREMISES CONSIDERED,** UPLC and UTC Canada are pleased to provide these comments on the Consultation Paper on BPL.

Respectfully submitted,

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