

November 28, 2005

Dr. Robert McCaughern  
Director General  
Spectrum Engineering Branch  
Industry Canada  
300 Slater Street  
Ottawa, Ontario  
K1A 0C8

***Subject: Response to SMSE-005-05; Consultation Paper on Broadband over Power Line (BPL) Communication Systems***

Dear Robert McCaughern;

We would like thank Industry Canada for the opportunity to respond to the Canada Gazette notice SMSE-005-05; Consultation Paper on Broadband over Power Line (BPL) Communication Systems.

Please find below some of the issues:

**Gazette Notice Timing**

**Issue/Suggestion:** There was not enough time given for a response and we ask for more time for consideration of this important topic.

**Comments:** We would like to point out that the Gazette Notice was released in the middle of the summer and comments due November 28. I chair the standards committee of the Continental Automated Buildings Association (CABA) and although the committee is interested in the notice, it is still putting its official position together. CABA is a not-for-profit industry association dealing with integrated systems and automation in homes and buildings. For clarification – this response is not CABA’s position, but that of Horizon Technologies Inc.

**Use of the term “BPL”**

**Issue/Suggestion:** Since there are two different types of BPL systems, “In-house” and “Access”, we ask that it be very clear what type of BPL system is being discussed throughout SMSE-005-05 and the various Industry Canada documentation. We suggest that when “BPL” is used alone, it means both In-house and Access. “In-House BPL” and “Access BPL” would then be used corresponding for those systems.

**Comments:** For example, in the background of the Gazette Notice SMSE-005-05 it states “BPL is a new technology that uses the power distribution grid to deliver high-speed Internet services to customers, businesses and industries.” One would have to assume that this really means “Access BPL”. Similarly, by the title of the gazette notice “Consultation Paper on Broadband over Power Line (BPL) Communication Systems” one would assume that “Access BPL” is intended.

However, this is contradicted within the Consultation Paper itself, chapter 3, “General Description of BPL Systems” covers both “Access BPL” and “In-House BPL”.

In addition, it makes it hard to comment properly on the paper, when it is not clear what is being presented – even whether or not to comment at all on this Gazette Notice.

### **Definition of Access Broadband over Power Line (Access BPL) – section 3.2.1**

**Issue/Suggestion:** There may be several issues with the definition, and the wording should be clarified – it is suggested that:

- all Access BPL systems are actually the medium voltage portion (MV) (remove “low voltage” (LV); this portion is already covered by ICES-006)
- upper frequency limit be 50 MHz, for TV broadcasts, particularly in Canada
- clarify that it specifically “does not include powerline carrier or In-House systems”

**Comments:** How is an Access BPL system that uses only “low voltage lines” different from In-House systems? Perhaps the best way to define them is that as far as regulations are concerned Access BPL is medium voltage and In-House is low voltage. Medium voltage is 12.5-36kV and low voltage is 120/240 or 347/600 volts.

### **LV only BPL Systems – section 3.2.3**

**Issue/Suggestion:** In section 3.2.3 “End-to-End Access BPL” there is a reference to “LV only BPL systems” as Access BPL systems. We suggest that this reference to be clarified or removed.

**Comments:** What exactly is a LV (Low Voltage) Access BPL system? – if it only goes on the low voltage system, what is the difference to In-House BPL systems. How does the wide area signal get to the LV systems? If there is a distinction between “LV only (Access) BPL systems” and “In-house BPL systems”, a drawing may help; in which case, it should clearly show the difference between the two. If it only uses the low voltage, why not use ICES-006?

### **Drawing of “In-House BPL” – section 3.2.3**

**Issue/Suggestion:** Figure 1 shows the In-House BPL system covering only the house, and not the wiring to the distribution transformer. It is suggested that the drawing include the wiring to the distribution transformer.

**Comments:** The signals of many In-House BPL systems propagate to the wiring from the house to the distribution transformer and onto the other houses being fed by that distribution transformer, and not including it may imply such systems are Access BPL systems.

### **Drawing of “Hybrid Access BPL System” – section 3.2.4**

**Issue/Suggestion:** In section 3.2.4 a “second hybrid” was discussed, as I can determine, includes a wide area network wireless system and low voltage powerline system. This is not clear, and should be clarified with its own diagram or removed.

**Comments:** If this system does not use the medium voltage powerline, is it a Access BPL system? How is it different from an In-House BPL system. Is not the concern really about the emissions of the long wires feeding the medium voltage powerline system. Low voltage emissions are already covered by ICES-006.

### **In-house BPL discussion and definition – section 3.3**

**Issue/Suggestion:** The discussion and definition considers an In-House BPL as “not owned, operated or controlled by an electricity service provider . . .”. The relationship to an electricity service provider is not helpful and should be removed. In the definition statements there are no mentions of “broadband” (only in the title) – it is suggested broadband be referenced within the definition statements. The definition should be very clear in differentiating between In-House and Access BPL – other changes may be appropriate.

**Comments:** As discussed in CABA’s Oct 6, 2004 submission to the FCC on the same topic, there was an example of controllable hot water heaters being activated by the power utility over an “In-House BPL system” – but according to the definition it would not be allowed and be considered an “Access BPL” system.

### **New Gazette Notice referencing ICES-006**

**Issue/Suggestion:** In order to ensure proper notice is given to the In-House BPL industry, it is suggested that a new gazette notice be issued to open up discussions or decisions relating to In-house BPL systems and reference be made to ICES-006 in the notice itself.

**Comments:** Reading the Gazette Notice SMSE-005-05 there is no reference to “In-House” BPL systems, and therefore it is not clear to the industry that the Consultation Paper deals with “In-House BPL” systems – inside the paper it even requests comments on the definition of “In-House BPL” systems. As mentioned above, the definition of BPL in the notice relates to Access BPL only, and not all BPL systems. Even if the ICES-006 regulation is not changed itself, any definition of “In-House BPL” systems within the “Access BPL” regulations, all should be alerted.

*In this document are a few of the many items (others - testing, procedures) in SMSE-005-05 that cause us concern and we encourage further dialogue on the issue.*

**Thank you for considering our comments,  
Ludo Bertsch, P. Eng  
President, Engineer  
Horizon Technologies Inc., Victoria, B.C.  
(250) 592-0487 [abpl@horizontec.com](mailto:abpl@horizontec.com)**