

The United Illuminating Company
FCC Form 442
Online Form, Item 7

The United Illuminating Company (UI) is requesting Experimental License authority to operate a test of Broadband over Power Line equipment in the community of Shelton, CT. The purpose of the test is to demonstrate the operability of BPL equipment on UI's electric plant.

UI plans to install a BPL system using its medium voltage (MV) facilities in a business and residential area of Shelton, passing approximately 200 businesses and residences. Amperion BPL equipment will be deployed on the MV lines and will communicate to end users using WiFi (2GHz) wireless technology. The test area will encompass 6 cells along a main street in Shelton.

The BPL system will interconnect to the Internet via fiber optic cable to the Point of Presence of UI's ISP. Amperion's BPL system employs orthogonal frequency division multiplexing (OFDM) within the 2-50 MHz band, although operations may be tested on some units above 50 MHz, but within the limits specified in Part 15. In no case will test power levels exceed those permitted to licensees.

UI's experiment will assess the viability and maturity of BPL and IEEE 802.11 Technologies, and the feasibility of using the facilities of a power company. In addition an assessment of the technical performance and delivery capabilities of services these systems are intended to provide, UI will conduct analysis on the electromagnetic compatibility of the BPL technology with licensed services.

Potential contribution aspects of the experiment include achieving a greater understanding of the operation and economics of BPL systems in a deployed configuration, performance assessment from a customer perspective of the test architecture using fiber to the substation, and information regarding the interaction of BPL with the licensed radio services.