

## **EXHIBIT IV**

**Ameren Energy Communications, Inc.  
Power Line Communications  
Experimental License WC2XXK  
Confirmation No. EL12223  
File No. 0093-EX-PL-2002**

**Third Report  
December 5, 2003**

Ameren Energy Communications, Inc. ("AEC") respectfully submits this, its third report, pursuant to the terms of its Experimental License, WC2XXK, File No. 0093-EX-PL-2002, for power line communications<sup>1</sup> granted on June 5, 2002.

### **I. Description of BPL Test Installations**

#### **Equipment selected for testing**

During this third six month period, AEC continued analyzing BPL equipment from a vendor, Main.net Communications, Ltd. ("Main.net"). Main.net provided the BPL modems for both in-home use and external use on the electric distribution system, as well as the software for network management.

#### **Others involved in the tests**

Pursuant to an agreement with AEC, Big River Telephone Company ("Big River") continues to act as the network operations manager for the tests. As noted in the second report, Big River arranged for interconnection of the BPL test system to the internet backbone via T-1 wireline connections and continues to act as the Internet Service Provider ("ISP") for purposes of the testing, including providing technical support to test users via Internet and telephone technical support.

Pursuant to a research arrangement with AEC, and at AEC's request, Southern Illinois University Carbondale continues to work on BPL equipment, including performance issues. Likewise, AEC affiliates continue to provide technical support for the tests, including testing the BPL equipment for electrical safety issues and developing installation and operational protocols.

#### **Description of test installation**

As stated in its first and second six month reports, AEC and its test partners have installed a BPL system in Cape Girardeau, Missouri that passes approximately 300 homes. The BPL network still consists of five "cells," as no cells have been added or deleted since AEC's second report.

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<sup>1</sup> Also known as "Broad-band over Power Line" ("BPL").

A cell is a group of homes served by a backhaul connection point. In this case, the backhaul connection points use wireline T-1 type connections. In the defined area, AEC has approximately 50 BPL Access devices connected to the medium voltage electric grid. Thus, to the extent that the term “installation” in Section 15.31(d) of the Commission’s rules refers to a medium voltage BPL access connection, these provide almost 50 representative “installations.” Approximately two-thirds of the facilities are deployed overhead and one-third underground.

Each cell consists of a BPL modem at the backhaul connection point, BPL modems acting as repeaters at points between the backhaul connection point and the end user, and a BPL modem within the premises of the end user plugged into a wall outlet and connected to their personal computer generally with an Ethernet cable. Network management is done via software provided by Main.net and operated by Big River.

The test network continues to operate in basically the same manner, from a technical and operations standpoint, as a commercial BPL network. One purpose of this deployment configuration is to test installations that are “representative” of the “typical installation” as set forth in Section 15.31(d).

As the test network was being installed, AEC notified households within the service area that they could participate in the tests. AEC stopped accepting test participants after acquiring between 50 and 60 participants. AEC has not materially increased or decreased the number of participants in the last six months. As required under the conditions of AEC’s experimental license, each participant signed an agreement acknowledging that the service is experimental in nature and can be cancelled at any time. Participants do not pay for the service; however, they agree to cooperate with AEC in gathering data for the tests.

## **II. Customer Acceptability Testing**

After completion of installation of the network, activation, and operation for approximately one and one-half years, the network has had few technical or operational problems. After a minimal amount of initial technical support to end users, additional technical support needed by end users has been minimal. AEC, Big River, and the customers generally are pleased with the operation of the network. As disclosed in AEC’s previous reports, AEC conducted three test surveys within the first six months of operation, two being questionnaires that could be filled out online and one being a “focus group” meeting. The surveys covered the users’ experience with operational issues, the amount and kind of use of the service, changes in users’ behavior after switching to the service, such as use of more or different Internet resources, and economic and marketing issues. Two small additional focus group surveys were conducted in the last six months.

The cumulative end user customer acceptability test results to date continue to support AEC’s possible interest in commercial deployment of the service. In that regard, AEC’s preliminary conclusion remains the same; that the BPL product is superior to dial-up and is competitive with DSL and cable modem service as perceived by the end users. Nonetheless, no decisions have yet been made regarding commercial deployment, and testing/research is ongoing.

### **III. BPL Emissions Testing**

#### **2003 Testing**

AEC's second six month report summarized the BPL emission tests conducted in Cape Girardeau on March 27 and May 6, 2003 (collectively, the "2003 Testing" or "2003 Tests"). The general purpose of the 2003 Tests was to: (a) obtain data to assist AEC in monitoring BPL emissions, and understanding the mechanisms of their occurrence and propagation; (b) correlate the foregoing emissions with the density of BPL apparatuses, modulation schemes, modem output level, and system physical properties; and (c) derive test procedures suitable for the environment of the overhead power line by refining and extending existing methods. The results of the 2003 Testing are contained within AEC's second six month report.

While AEC continues to analyze data collected as a result of the 2003 Testing, it has not conducted additional emissions tests since that time.

#### **Interference Complaints**

AEC and Big River have not received any complaints of interference from test participants or third parties during the tests.